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Key migratory bird terrestrial habitat sites in the Northwest Territories

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Abstract

This report identifies 80 Key Habitat Sites for migratory birds in the Northwest Territories. A Key Habitat Site is a terrestrial area that supports at least 1% of the Canadian population of at least one migratory bird species (or, in some cases, subspecies). Sites also include marine and freshwater habitats where the value of a terrestrial habitat is intimately linked to the presence of aquatic habitats. Data for the identification of sites were drawn from existing published and unpublished reports and personal communications.

The first version of this report appeared in 1984. In this second edition, 20 new sites have been added to the list. Many of the sites recognized in the first edition have been revised, some quite substantially. Eighteen of the Key Habitat Sites overlap with existing Migratory Bird Sanctuaries, and one site overlaps with Polar Bear Pass National Wildlife Area. One site (Prince Leopold Island) is scheduled for designation as a Migratory Bird Sanctuary in 1991.

This report describes key habitat areas that are essential to the welfare of various migratory bird species in Canada. It serves as a statement of Canadian Wildlife Service interest in lands where special wildlife conservation measures may be required, and it is offered as a guide to the conservation efforts of other agencies having interests in the Northwest Territories.

Résumé

Le présent rapport identifie 80 habitats primordiaux des oiseaux migrateurs dans les Territoires du Nord-Ouest. L'habitat terrestre primordial est celui qui entretient l'existence d'au moins 1 % de la population canadienne d'au moins une espèce d'oiseau migrateur ou, dans certains cas, de sous-espèces. Les sites comprennent également des habitats marins et d'eau douce là où la qualité de l'habitat terrestre est intimement reliée à ces zones non terrestres. Les données servant à l'identification des sites ont été tirées de rapports publiés et non publiés, ainsi que de communications personnelles.

La première édition de ce rapport a paru en 1984. La liste de cette deuxième édition comprend 20 nouveaux sites. Bon nombre des sites figurant à la première édition ont été révisés, et certains en profondeur. Dix-huit des habitats primordiaux chevauchent des Refuges d'oiseaux migrateurs, et un autre chevauche la Réserve nationale de faune de Polar Bear Pass. On prévoit qu'un de ces habitats, celui de l'île Prince Leopold, sera désigné en 1991 comme Refuge d'oiseaux migrateurs.

Le présent rapport décrit des habitats primordiaux qui sont essentiels à la protection de diverses espèces d'oiseaux migrateurs au Canada. Il permet d'affirmer l'intérêt du Service canadien de la faune à l'égard des habitats pour lesquels des mesures de conservation de la faune sont requises et vise à orienter les efforts des autres organismes et organisations qui s'intéressent aux Territoires du Nord-Ouest.

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Contents

Introduction 7

Methodology and rationale 7

Protection of migratory bird habitats 10

Literature cited 11

Site summaries 13
Site 1: Mackenzie River Delta 15
Site 2: Kugaluk River 17
Site 3: Anderson River Delta 19
Site 4: Harrowby Bay 21
Site 5: Cape Parry 23
Site 6: Egg River 25
Site 7: Thomsen River 27
Site 8: Prince Patrick Island 29
Site 9: Seymour Island 31
Site 10: Polar Bear Pass 33
Site 11: Cheyne Islands 35
Site 12: Browne Island 37
Site 13: Baillie-Hamilton Island 39
Site 14: North Kent Island 41
Site 15: Cape Vera 43
Site 16: Skruis Point 45
Site 17: Sydkap Ice Field 47
Site 18: Inglefield Mountains 49
Site 19: Eastern Devon Island 51
Site 20: Coburg Island 53
Site 21: Cape Liddon 55
Site 22: Hobhouse Inlet 57
Site 23: Prince Leopold Island 59
Site 24: Batty Bay 61
Site 25: Creswell Bay 63
Site 26: Northwestern Brodeur Peninsula 65
Site 27: Berlinguet Inlet 67
Site 28: Baillarge Bay 69
Site 29: Cape Hay 71
Site 30: South Bylot Island 73
Site 31: Cape Graham Moore 75
Site 32: Buchan Gulf 77
Site 33: Scott Inlet 79
Site 34: Abbajalik and Ijutuk Islands 81
Site 35: Cape Searle 83
Site 36: Reid Bay 85
Site 37: North Spicer Island 87
Site 38: Foxe Basin Islands 89
Site 39: Great Plain of the Koukdjuak 91
Site 40: Lower Mackenzie River Islands 93
Site 41: Middle Mackenzie River Islands 95
Site 42: Brackett Lake 97
Site 43: Southeastern Mackenzie Mountains 99
Site 44: Mills Lake 101
Site 45: Beaver Lake 103
Site 46: Northwest Point 105
Site 47: North Arm, Great Slave Lake 107
Site 48: Slave River Delta 109
Site 49: Sass and Nyarling Rivers 111
Site 50: Jenny Lind Island 113
Site 51: Queen Maud Gulf 115
Site 52: Middle Back River 117
Site 53: Lower Back River 119
Site 54: Thelon River 121
Site 55: Rasmussen Lowlands 123
Site 56: Middle Quoich River 125
Site 57: McConnell River 127
Site 58: Turton Island 129
Site 59: Boas River 131
Site 60: East Bay 133
Site 61: Coats Island 135
Site 62: Cape Dorset 137
Site 63: Fraser Island 139
Site 64: Digges Sound 141
Site 65: Awrey Island 143
Site 66: Hantzsch Island 145
Site 67: Akpatok Island 147
Site 68: Eider Islands 149
Site 69: Plover and Payne Islands 151
Site 70: Gyrfalcon Islands 153
Site 71: Northeast Ungava Bay 155
Site 72: Koktac River Archipelago 157
Site 73: Sleeper Islands 159
Site 74: North Belcher Islands 161
Site 75: Salikuit Islands 163
Site 76: Twin Islands 165
Site 77: Northeast James Bay 167
Site 78: Akimiski Island 169
Site 79: Boatswain Bay 171
Site 80: Hannah Bay 173

Appendices 174

Alphabetical index of Key Habitat Sites 178

Geographic Index of Key Habitat Sites 184

Index map of Key Habitat Sites inside back cover

List of tables

Table 1. National and territorial population estimates for certain bird species in the Northwest Territories 8

List of appendices

A-1. Summary of Key Habitat Sites for breeding populations of swans and geese in the Northwest Territories 174

A-2. Summary of Key Habitat Sites for breeding populations of eiders, gulls, and terns in the Northwest Territories 175

A-3. Summary of Key Habitat Sites for breeding populations of seabirds in the Northwest Territories 176

B. Scientific names of bird species and subspecies mentioned in the text (excluding Table 1) 177

Introduction

Under the Migratory Birds Convention Act of 1917, the Canadian Wildlife Service (CWS) is responsible for the conservation of migratory bird populations in Canada. Pursuant to this Act, CWS administers the Migratory Birds Regulations, which address the hunting and possession of migratory birds, and the Migratory Bird Sanctuary Regulations, which provide for the establishment and management of bird sanctuaries. In addition, CWS administers the Canada Wildlife Act (1973). Under this Act, CWS may take measures to protect wildlife species in danger of extinction and may acquire lands for wildlife research, conservation, and interpretation. The administration and management of such lands, known as National Wildlife Areas, are carried out in accordance with the Wildlife Area Regulations.

Adequate habitat (in both quantity and quality) is fundamental to the conservation of all wildlife species. Accordingly, consistent with its enabling legislation and with the Federal Policy on Land Use (1981), CWS protects and manages habitats of particular ecological value to wildlife — a vital part of Canada's national heritage.

Identification of key areas is a first step in providing protection to wildlife habitats. This document identifies sites within the Northwest Territories — called Key Habitat Sites — that are essential to the welfare of various migratory bird species in Canada. It serves as a statement of CWS interest in lands where special wildlife conservation measures may be required, and it is offered as a guide to the conservation efforts of other agencies having interests in the Northwest Territories.

Methodology and rationale

CWS is committed to the conservation of all species and subspecies of wildlife in the Northwest Territories. This document, however, addresses only migratory birds as defined in the Migratory Birds Convention Act.

Like the establishment of hunting seasons and bag limits, the protection of Key Habitat Sites is a population management tool. Such sites are so important that their degradation or destruction could have a significant negative impact upon a particular population. As the severity of an impact is manifested in terms of a numerical decline in a population, the importance of a particular site is a function of the proportion of a population that the site supports for any part of the year.

The effectiveness of site protection as a management tool is dependent upon the biology of the species using the site. The following general statements can be made:

(1) Populations that are geographically widespread or widely dispersed throughout a variety of habitats are less vulnerable to site-specific threats, as only a small portion would be affected. For these species, very large areas would be required to support a significant proportion of the population.

(2) Populations that are concentrated for any part of the year are more vulnerable to site-specific threats, as a significant proportion of the population could be affected. Such habitat sites include staging areas, moulting areas, nesting colonies, and the foraging areas of some species.

(3) Populations that occupy geographically restricted habitats are vulnerable if their habitat is threatened. Certain rare, threatened, or endangered species are prime examples.

Species occurring in the Northwest Territories that are considered within the context of the above statements are listed in Table 1. Population data are presented for all relevant subspecies, wherever possible. For Canada Geese, however, winter indices are reported in the literature by population management unit rather than subspecies. Each unit may contain more than one subspecies; conversely, each species may be represented in more than one management unit (see Table 1).

A minimum requirement was established as a guideline for the recognition of Key Habitat Sites. Sites that are believed to support at least 1% of a national population are considered to be Key Habitat Sites. This criterion has been used extensively in Europe and in the selection of sites of international importance designated under the Convention on the Conservation of Wetlands of International Importance

(Atkinson-Willes 1976; Prater 1976; Fuller 1980). No attempt was made to compare or rank habitat sites.

We have relied on the best available estimates of national and regional bird populations and the numbers present at each site. This approach, however, has limitations. For example, in some cases, the only available information is outdated or limited to a single observation. Although such data are hardly ideal, they do provide an initial identification of sites and an indication of where surveys are needed.

The recognition of Key Habitat Sites is a dynamic process. The importance of individual sites changes over time in response to population fluctuations and changes in habitat conditions. As a result, mapped delineations of biologically important areas do not always coincide with existing management boundaries. This report represents our present understanding of the habitat needs of selected migratory bird populations. As further information becomes available, site importance will be reevaluated.

Table 1
National and territorial population estimates for certain bird species in the Northwest Territories[a]

Species[b]	Subspecies	Canada	N.W.T.	Reference
Northern Fulmar *Fulmaris glacialis*	*minor*	363 000	363 000	Nettleship 1980
Tundra Swan *Cygnus columbianus*		151 000[c,d]	151 000[c,d]	Anon. 1983, 1986a, 1988
Trumpeter Swan *Cygnus buccinator*		470[c]	72[c]	Anon. 1986b
Canada Goose[e] *Branta canadensis*				
Atlantic	*interior*	807 000[c,d]	Unknown	Anon. 1983, 1986a, 1988
Pacific	*moffitti*	50 000[c]	Unknown[f]	A.X. Dzubin, pers. commun.
Short-grass Prairie	*parvipes*	176 000[c,d]	176 000[c,d]	Anon. 1983, 1986a, 1988; Bellrose 1986
Rocky Mountain	*hutchinsii* *moffitti* *maxima*	80 000[c,d,g]	Unknown[f]	Anon. 1983, 1986a, 1988
Highline Plains	*maxima* *moffitti*	82 000[c,d,g]	Unknown[f]	Anon. 1983, 1986a, 1988
Western Prairie	*maxima* *interior*	166 000[c,d]	Unknown[f]	Anon. 1983, 1986a, 1988
Eastern Prairie	*interior*	182 000[c,d]	Unknown[f]	Anon. 1983, 1986a, 1988
Manitoba Interlake	*maxima*	45 000[c,d]	Unknown[f]	D. Caswell, pers. commun.
Tennessee Valley	*interior*	141 000[c,d]	Unknown[f]	Anon. 1983, 1986a, 1988
Tall-grass Prairie	*parvipes* *hutchinsii*	241 000[c,d]	241 000[c,d]	Anon. 1983, 1986a, 1988; Bellrose 1986
Brant *Branta bernicla*	*hrota* (Atlantic)	125 000[c,d]	125 000[c,d]	Anon. 1986a, 1988
	nigricans (Black or Pacific)	40 000[c,h]	40 000[c,h]	Anon. 1982; J.S. Hawkings, pers. commun.
Greater White-fronted Goose *Anser albifrons*				
East Mid-continent	*frontalis*	77 000[c,d]	77 000[c,d]	Anon. 1986a, 1988
West Mid-continent	*frontalis*	132 000[c,d]	132 000[c,d]	Anon. 1986a, 1988
Snow Goose *Anser caerulescens*	*atlanticus* (Greater)	100 000[i]	100 000[i]	A. Reed, pers. commun.
	caerulescens (Lesser)	911 000	822 000	Kerbes 1982, 1988, and pers. commun.; Reed et al. 1987; McCormick 1989; E.G. Cooch, J.C. Davies, pers. commun.
Ross' Goose *Anser rossii*		89 300[i]	89 300[i]	R. Kerbes, pers. commun.
Common Eider *Somateria mollissima*	*sedentaria* (Hudson Bay)	41 500	41 500	Nakashima and Murray 1988
	borealis (Northern)	93 350	93 350	Abraham and Finney 1986
American Black Duck *Anas rubripes*		303 000[c,d]	Unknown	Anon. 1989
Whooping Crane *Grus americana* (E)		131[c]	131[c]	E. Kuyt, pers. commun.
Eskimo Curlew *Numenius borealis* (E)		23[c,k]	23[c,k]	Gollop et al. 1986
Sabine's Gull *Xema sabini*		20 000[c,k]	20 000[c,k]	Parmelee et al. 1967; Nettleship 1974; Alliston et al. 1976; McLaren et al. 1977; Blomqvist and Elander 1981; Allen 1982; Gaston et al. 1986; Alexander et al. 1988
Ivory Gull *Pagophila eburnea* (R)		1 200	1 200	Thomas and MacDonald 1987
Ross' Gull *Rhodostethia rosea* (R)		10	10	Macey 1981
Caspian Tern *Sterna caspia* (R)		7 890–8 390	287	Cairns et al. 1986; McCormick and Sirois 1988; Sirois et al. 1989, 1991; Sirois and Seddon 1990; H. Blokpoel, S. Brechtel, W. Campbell, G. Chapdelaine, S. Houston, B. Koonz, A.R. Lock, R.I.G. Morrison, K. Roney, A.R. Smith, pers. commun.

Table 1 (continued)
National and territorial population estimates for certain bird species in the Northwest Territories[a]

Species[b]	Subspecies	Canada	N.W.T.	Reference
Black-legged Kittiwake *Rissa tridactyla*	*tridactyla*	186 000	95 000	Davis et al. 1974; Brown et al. 1975; Alliston 1977; Nettleship 1980
Thick-billed Murre *Uria lomvia*	*lomvia*	1 454 000	1 441 000	Nettleship and Evans 1985
	arra	800[c]	800[c]	Johnson and Ward 1985
Black Guillemot *Cepphus grylle*	*ultimus*	76 000	60 000	Nettleship and Evans 1985

[a] Estimates are of breeding pairs unless otherwise indicated.
[b] E = Endangered species; R = Rare species.
[c] Individual birds.
[d] Fall migration, midwinter counts.
[e] Local population estimates for a particular subspecies of Canada Geese were compared with the combined population estimate of all the management units within which that subspecies is represented. This method reduces the apparent importance of the habitat site to the local subspecies.
[f] A portion of the management unit moults in the Northwest Territories.
[g] North American population.
[h] The number of Pacific Brant breeding in Canada, most of which breed in the Northwest Territories, is poorly known. The highest published estimate is 25 900 birds in spring (Richardson and Johnson 1981).
[i] Spring migration counts.
[j] World population.
[k] Educated guess. Much of the range of the Sabine's Gull in the western Arctic is not well surveyed. From studies that are available for the entire Arctic (some of which are outdated), we estimated a summer population of 10 000 birds and then doubled it to account for unsurveyed areas.

Protection of migratory bird habitats

In the Northwest Territories, a variety of "conservation area" designations are in place for the protection of wildlife species and their habitats. All designations do not necessarily protect migratory bird habitats; however, where they overlap with Key Habitat Sites, they are listed under the heading "Status of Key Habitat Site." The regulatory or management regimes associated with the various designations are summarized below.

Migratory Bird Sanctuary

Migratory Bird Sanctuaries are established under the Migratory Birds Convention Act and are managed and administered by CWS in accordance with the Migratory Bird Sanctuary Regulations. In this publication they are usually referred to as "bird sanctuaries."

National Wildlife Area

National Wildlife Areas are established under the Canada Wildlife Act and are managed and administered by CWS in accordance with the Wildlife Area Regulations.

Wetland of International Importance

In 1981, Canada became a signatory to the Convention on the Conservation of Wetlands of International Importance (also known as the Ramsar Convention). Under this Convention, Canada has obligations to identify wetlands of international importance and to ensure that they are adequately protected. CWS, with the cooperation of provincial and territorial governments, carries out the obligations of the Convention on behalf of Canada.

International Biological Programme (IBP) Site

Canada participated in the International Biological Programme between 1964 and 1974, and 120 IBP Sites under the "Conservation of Terrestrial Communities" category were identified in the Northwest Territories. Many of those sites were selected on the basis of their importance to migratory bird populations. There are no special regulatory controls in place for protecting IBP Sites, but the designation serves to highlight the ecological importance of particular areas.

National Park or National Park Reserve

Some migratory bird habitats are protected from human land uses because they lie within National Parks or National Park Reserves. Regulations under the National Parks Act do not deal with migratory bird habitats per se, but excellent protection is provided to them because of general prohibitions on many land-use activities and types of development.

Designations under the Wildlife Act (NWT)

The Wildlife Preserves Regulations and the Wildlife Sanctuaries Regulations of the Wildlife Act (NWT) are administered by the Department of Renewable Resources, Government of the Northwest Territories. The status of the land within Wildlife Preserves and Wildlife Sanctuaries is not affected by these regulations, as they deal solely with hunting.

Territorial Land Use Regulations

Land-use activities on federal Crown lands in the Northwest Territories are regulated under the Territorial Lands Act and Territorial Land Use Regulations. They are administered by the Department of Indian Affairs and Northern Development, which is responsible for the control, management, and administration of northern lands and the disposition of land and resource rights. Wildlife habitat on lands that are "withdrawn from disposition" under the Territorial Lands Act (e.g., the Thelon Wildlife Sanctuary) are effectively protected because land dispositions are not granted.

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Site summaries

Key Habitat Sites information is summarized according to the following format:

Site number

A number that references each site on the accompanying geographic index map of the Northwest Territories (see inside back cover).

Name

A prominent topographical feature.

Location

The latitude and longitude of the approximate geographic centre of each site.

Size

The approximate area, in square kilometres, of each site. For most seabird colonies, this descriptor is not applicable. Therefore, the length of nesting cliff is also considered to be the area of each site. The indicated boundaries represent the limits of biologically important sites. Management boundaries have not been proposed.

Description

A brief description of the site, indicating its location relative to prominent topographical or man-made features, prominent topographical features, and dominant vegetation types.

Biological value

Relevant species summaries, including numbers present and seasonal occupation and activities (e.g., nesting, staging, moulting, foraging). Supplementary information, such as the presence of other wildlife or features of the plant communities that contribute to the biological importance of a Key Habitat Site, is also included. Scientific names of bird species are listed in Table 1 and Appendix B.

Sensitivities

Types of activities that could destroy or degrade the site.

Potential conflicts

Present or proposed activities that could have a negative impact on the site.

Status of Key Habitat Site

Any "conservation area" designations that overlap with the Key Habitat Site.

References

Relevant background information plus literature cited in the summary.

Map

Each site summary is accompanied by an appropriate map. The standard mapping conventions are as follows:

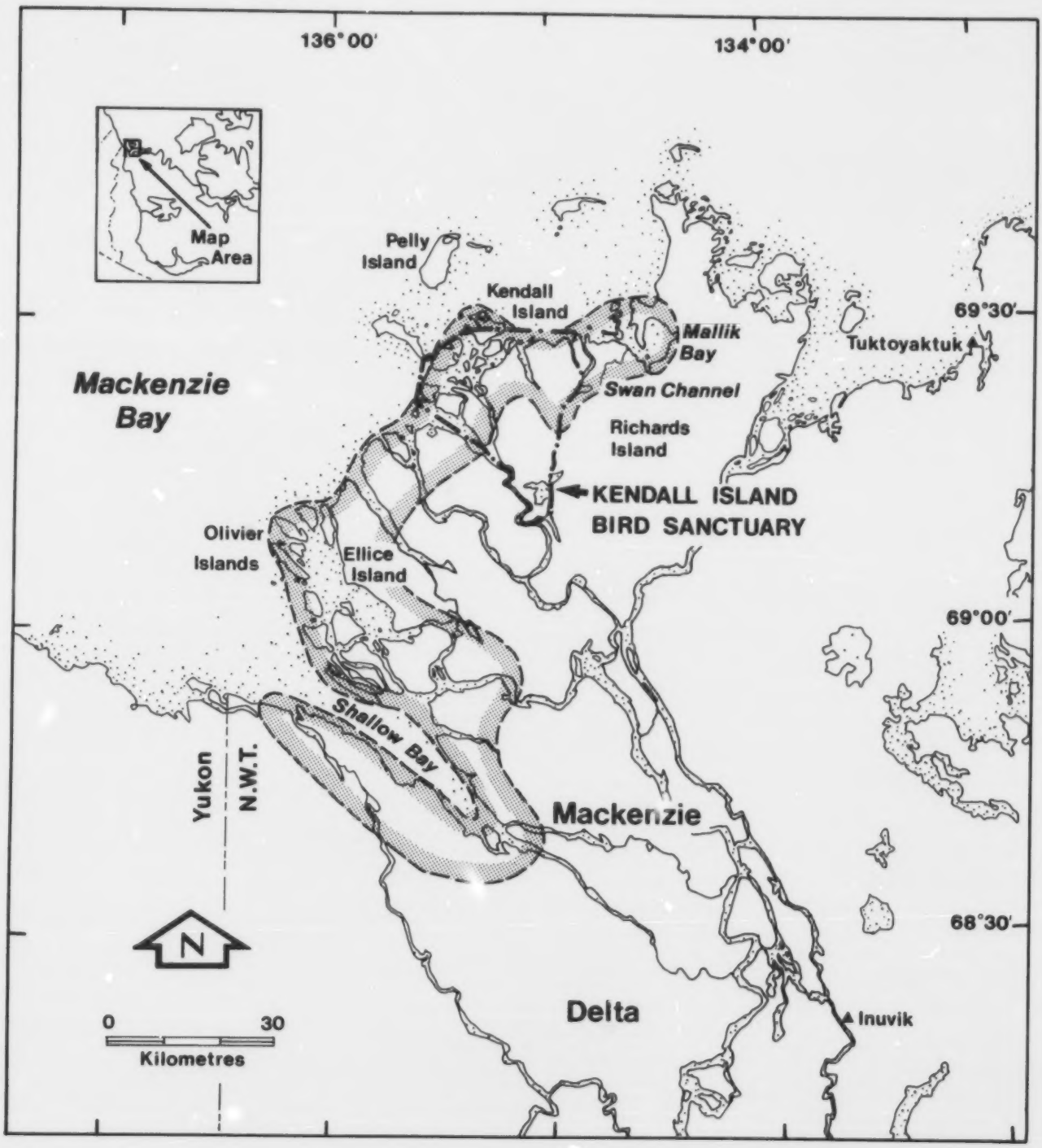
— extent of a Key Habitat Site.

— colony location. This symbol may also delimit the approximate extent of a Key Habitat Site, as it is difficult to portray the area of some habitat types (e.g., seabird nesting cliffs) with the above mapping symbol.

 — a legally designated area such as a Migratory Bird Sanctuary or National Park.

— area of nesting concentration.

Site 1: Mackenzie River Delta



Site 1: Mackenzie River Delta

Location: 69°20′N, 135°30′W **Size: 2889 km²**

Description

This area includes Shallow Bay, Olivier and Ellice islands, Pelly Island, and part of Richards Island. The islands are remnants of the preglacial Mackenzie Delta as well as part of the developing modern delta. Much of the area is covered by fluvial deposits of silt and sand. These low deltaic islands are generally marshy and vegetated by sedges, grasses, and horsetail; shrubs predominate on higher areas. Levees have formed along the shores of islands as a result of spring flooding. The lowlands of Richards Island are dotted with numerous lakes and ponds and contain several pingos.

Biological value

The islands of the outer delta are important staging grounds from late August to late September for several species of geese and shorebirds. Moderate numbers of Lesser Snow Geese congregate in this area for short periods, just prior to southward migration (1973, 1974, and 1976 averaged 15 000 adults and 10 000 young, which is about 1% of the national breeding population). However, in years when the Yukon and Alaskan north slopes are snow-covered, up to 10% of the national breeding population may stage for extended periods in the delta (in 1975, 152 350 adults and 170 650 young used this area). The most important areas are around Shallow Bay and northern Olivier and Ellice islands. Between 1973 and 1976, peak numbers of staging Greater White-fronted Geese ranged from 12 500 to 23 700 birds (9–18% of the western mid-continent population), mostly around Shallow Bay. It is likely that a large proportion of the Black Brant population migrates west through the outer Mackenzie Delta, but stopovers are probably short in duration. From 1973 to 1976, the largest number of Brant seen during one survey was 6112. From 1973 to 1976, peak fall numbers of Tundra Swans ranged from 1900 to 3100 adults and young. This represents between 1 and 2% of the national population. Swans concentrate around Mallik Bay, Swan Channel, the outer section of the Kendall Island Bird Sanctuary, and eastern Shallow Bay. Small numbers of Canada Geese also use the area (Koski 1975, 1977a, 1977b; Koski and Gollop 1974). Large numbers of shorebirds migrate through the delta, but the extent of use is not known (Alexander et al. 1988).

Small islands south of Kendall Island support a colony of Lesser Snow Geese. Since the 1950s, the colony has ranged in size from near zero to 8000 birds (Barry and Barry 1982). In 1987, there were 690 breeding pairs (Kerbes 1988). Approximately 2500 Tundra Swans and 2800 Greater White-fronted Geese, as well as Sandhill Cranes, Brant, dabbling ducks, and shorebirds, nest and moult throughout this area. Swan Channel supports the densest concentration of nesting swans in the delta. Up to 200 nesting pairs and 1100 premoulting birds occur there annually. Up to 40 pairs each of Brant, Tundra Swans, Glaucous Gulls, and Arctic Terns nest on Pelly Island. Up to 500 swans may also moult on the island (Barry and Barry 1982; Alexander et al. 1988).

More than 5000 white whales calve in the Mackenzie estuary. The outer islands support a significant population of barren-ground grizzly bears.

Sensitivities

Nesting, staging, and moulting waterfowl are sensitive to disturbance and the degradation of low-lying habitats.

Potential conflicts

The region has been subject to extensive seismic and exploratory drilling activity. The development of gas processing plants and a pipeline network is likely in the near future. Drilling on offshore artificial islands is currently under way.

Status of Key Habitat Site

Part of the Key Habitat Site lies within the Kendall Island Bird Sanctuary.

References

Alexander, S.A.; Barry, T.W.; Dickson, D.L.; Prus, H.D.; Smyth, K.E. 1988. Key areas for birds in coastal regions of the Canadian Beaufort Sea. Can. Wildl. Serv., Edmonton. 146 pp.

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Kerbes, R.H. 1988. International Snow Goose neckbanding project — progress report. Inuv. WMAC (NWT) Tech. Rep. No. 4. 10 pp.

Koski, W.R. 1975. A study of the distribution and movements of Snow Geese, other geese, and Whistling Swans on the Mackenzie Delta, Yukon north slope, and Alaskan north slope in August and September, 1974, including a comparison with similar data from 1973. Arct. Gas Biol. Rep. Ser. 30(1):1–58.

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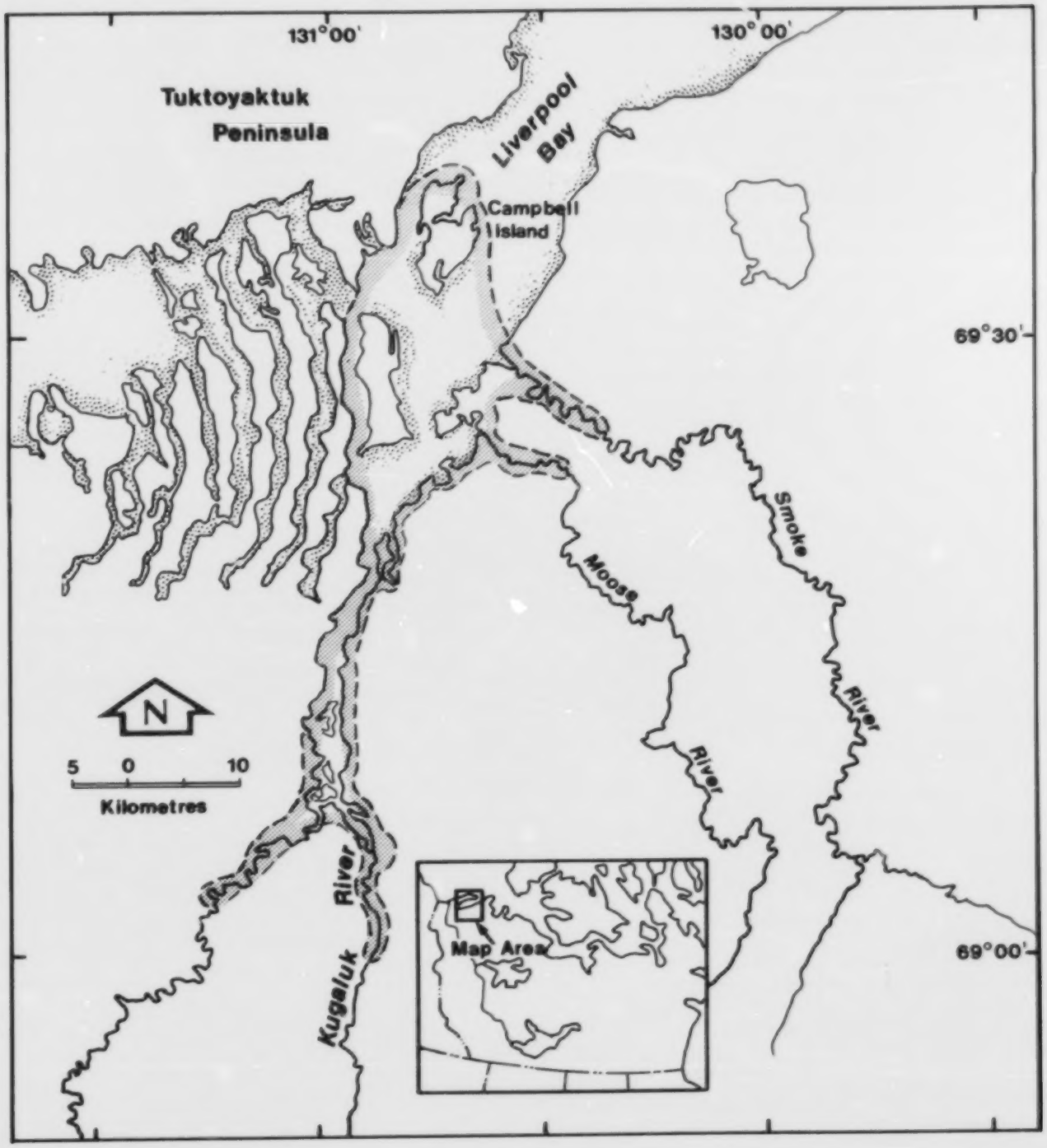
Koski, W.R.; Gollop, M.A. 1974. Migration and distribution of staging Snow Geese on the Mackenzie Delta, Yukon and eastern Alaskan north slope, August and September, 1973. Arct. Gas Biol. Rep. Ser. 27(1):1–38.

Site 2: Kugaluk River



Site 2: Kugaluk River

Location: 69°20′N, 130°50′W **Size: 542 km²**

Description

The Kugaluk, Smoke, and Moose rivers lie south of the Tuktoyaktuk Peninsula and flow into Liverpool Bay. The area is of low relief with extensive tidal flats and sandy soils, resulting from glacial deposition. Vegetation consists mainly of meadows and marshes of sedges and grasses. A severe fire in the area caused a regression of the tree line 16 km south of its original limits, but there are a few relict spruce in the vicinity of the Moose and Smoke rivers. Campbell Island is a low-lying wetland.

There is an archaeological site in the northeastern part of the Smoke River delta and an outpost camp at the mouth of the Kugaluk River.

Biological value

The sedge marshes and sand flats of the Kugaluk River and estuary, Smoke and Moose river deltas, and Campbell Island are important moulting areas for several species of waterfowl. Between 10 000 and 20 000 nonbreeding Canada Geese (Short-grass Prairie; subspecies *parvipes* and *hutchinsii*) moult on the three river deltas and Campbell Island during July and August (Alexander et al. 1988), representing 2–5% of the two subspecies. Around the same time, between 7000 and 15 000 Greater White-fronted Geese moult on the three river deltas, constituting 5–11% of the western mid-continent population. Approximately 500 nonbreeding Tundra Swans moult in the area (Alexander et al. 1988).

Small numbers of these species, as well as Lesser Snow Geese and Brant, nest in this area (Barry and Barry 1982; Alexander et al. 1988). A few thousand fish-eating birds, notably Red-breasted and Common mergansers and Glaucous Gulls, feed in the area from June to mid-August. Moulting scoters, scaup, and Oldsquaw are present during mid- to late summer (Alexander et al. 1988).

The area lies on a migration route for the Bluenose caribou herd. Barren-ground grizzly bears, Arctic and red foxes, martens, and muskrats are also common. Bearded seals and occasionally white whales are noted in the Liverpool Bay area.

Sensitivities

Waterfowl are sensitive to disturbance and the degradation of their lowland habitats. Moulting birds are particularly vulnerable during their flightless period.

Potential conflicts

Oil exploration leases occur within the site. Increased aircraft traffic over the area could result from development activities in the Beaufort Sea and on the Tuktoyaktuk Peninsula.

Status of Key Habitat Site

IBP Site.

References

Alexander, S.A.; Barry, T.W.; Dickson, D.L.; Prus, H.D.; Smyth, K.E. 1988. Key areas for birds in coastal regions of the Canadian Beaufort Sea. Can. Wildl. Serv., Edmonton. 146 pp.

Barry, S.J.; Barry, T.W. 1982. Seabird surveys in the Beaufort Sea, Amundsen Gulf, and Prince of Wales Strait, 1981 season. Unpubl. rep., Can. Wildl. Serv., for Dome Petroleum Ltd. and Esso Resources Canada Ltd., Calgary. 52 pp.

Barry, T.W. 1982. Significant wildlife resource areas in the Beaufort Sea, Amundsen Gulf, and Prince of Wales Strait. Unpubl. rep., Can. Wildl. Serv., Edmonton. 71 pp.

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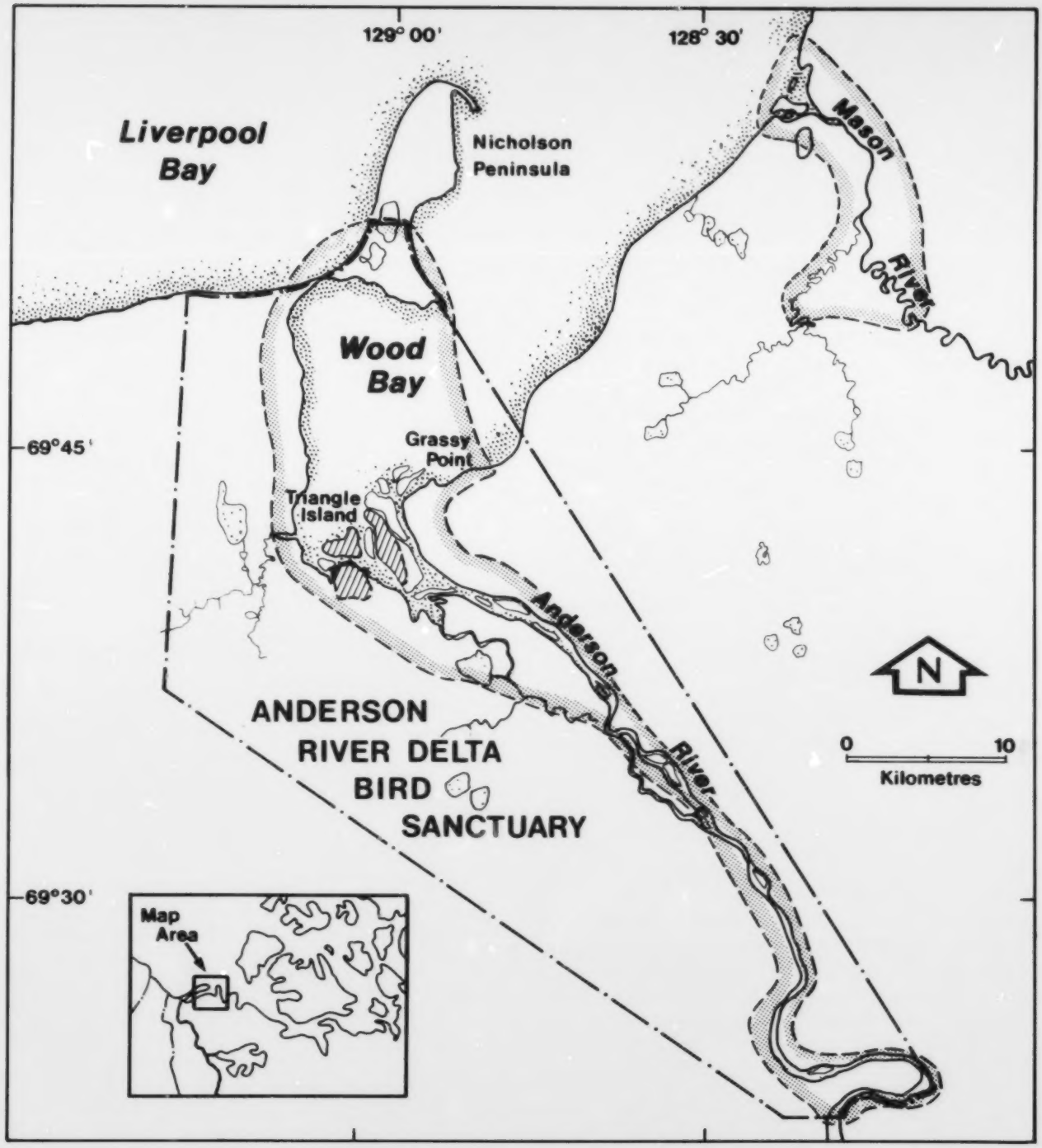
Site 3: Anderson River Delta



Site 3: Anderson River Delta

Location: 69°42′N, 129°00′W **Size: 491 km²**

Description

This site includes the land and water surrounding the lower Anderson River. The river spans the transition from spruce forest to *Dryas* tundra and flows through a gradually widening floodplain that is flanked by river terraces. The delta of low alluvial islands, channels, and lakes extends northward into the shallow waters of Wood Bay. The surrounding landscape is generally low and rolling and is dotted with lakes and ponds. The lower river passes through sedimentary rocks of Cretaceous origins. Tundra polygons have developed in poorly drained soils around the river mouth.

Vegetation of the outer delta is primarily sparse grasses, sedges, and Arctic willows; upriver, the land becomes increasingly vegetated. Small spruce grow among willows as far north as the river mouth.

There are numerous archaeological sites in the area, because the abundance of wildlife and the availability of driftwood once supported an Inuit community.

Biological value

There is a colony of 4000 to 8000 nesting Lesser Snow Geese (3300 pairs in 1987) on islands (covering about 30 km²) in the Anderson River delta, which represents up to about 1% of the national population of this subspecies (Kerbes 1986, 1988; Alexander et al. 1988). The outer delta provides nesting habitat for up to 2500 Black Brant, representing nearly 6% of the Canadian population of this subspecies. The inner delta supports 75 breeding pairs and 1200 nonbreeding Tundra Swans. Greater White-fronted and Canada geese are scattered nesters along tributary streams, and about 1000 Greater White-fronted Geese moult in the area. Oldsquaw, scaup, and scoters use the shores of Wood Bay for nesting and moulting, whereas shorebirds use the tidal flats for feeding and staging. Between 3000 and 5000 dabbling ducks moult and stage along the river valley. The variety of plant communities has resulted in a high diversity of passerine species. Nest sites of raptorial birds are also present in the delta (Barry 1967; Barry and Barry 1982; Alexander et al. 1988).

Tundra Swans arrive in May and leave in late September or early October. Snow Geese, Brant, and Greater White-fronted Geese first appear in late May and begin fall migration at the end of August.

The Mason River delta supports approximately 1000 moulting, nonbreeding Greater White-fronted Geese, 100 moulting Tundra Swans, 100 pairs of nesting Brant, and up to 50 pairs of Glaucous Gulls. It is also a brood-rearing area for up to 500 Lesser Snow Geese from Anderson River (Alexander et al. 1988).

The Eskimo Curlew formerly nested in the Anderson River area. Although the species is almost extinct, eight sightings were made between 1961 and 1989 in this general area, from the Anderson River delta to 140 km upriver (Gollop et al. 1986; T.W. Barry, pers. commun.).

Part of the Anderson River area was unglaciated, providing a refugium for some plants and insects that now exhibit a unique geographical distribution.

Barren-ground grizzly bears are fairly common, and several denning sites are known. Over the 1970s, an increasing number of caribou have moved into the area for the summer (Barry 1982). The proximity of the tree line also enables moose to inhabit the area.

Sensitivities

Low-lying areas are susceptible to terrain disturbance. Breeding and moulting birds are sensitive to disturbance.

Potential conflicts

Seismic work was conducted in the area during the 1970s. There have been no recent activities. The Anderson River is popular for canoe trips. Most parties are picked up by float-plane at the delta.

Status of Key Habitat Site

Most of the Key Habitat Site lies within the Anderson River Delta Bird Sanctuary; IBP Site.

References

Alexander, S.A.; Barry, T.W.; Dickson, D.L.; Prus, H.D.; Smyth, K.E. 1988. Key areas for birds in coastal regions of the Canadian Beaufort Sea. Can. Wildl. Serv., Edmonton. 146 pp.

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Kerbes, R.H. 1986. Lesser Snow Geese, *Anser c. caerulescens*, nesting in the western Canadian Arctic in 1981. Can. Field-Nat. 100(2):212–217.

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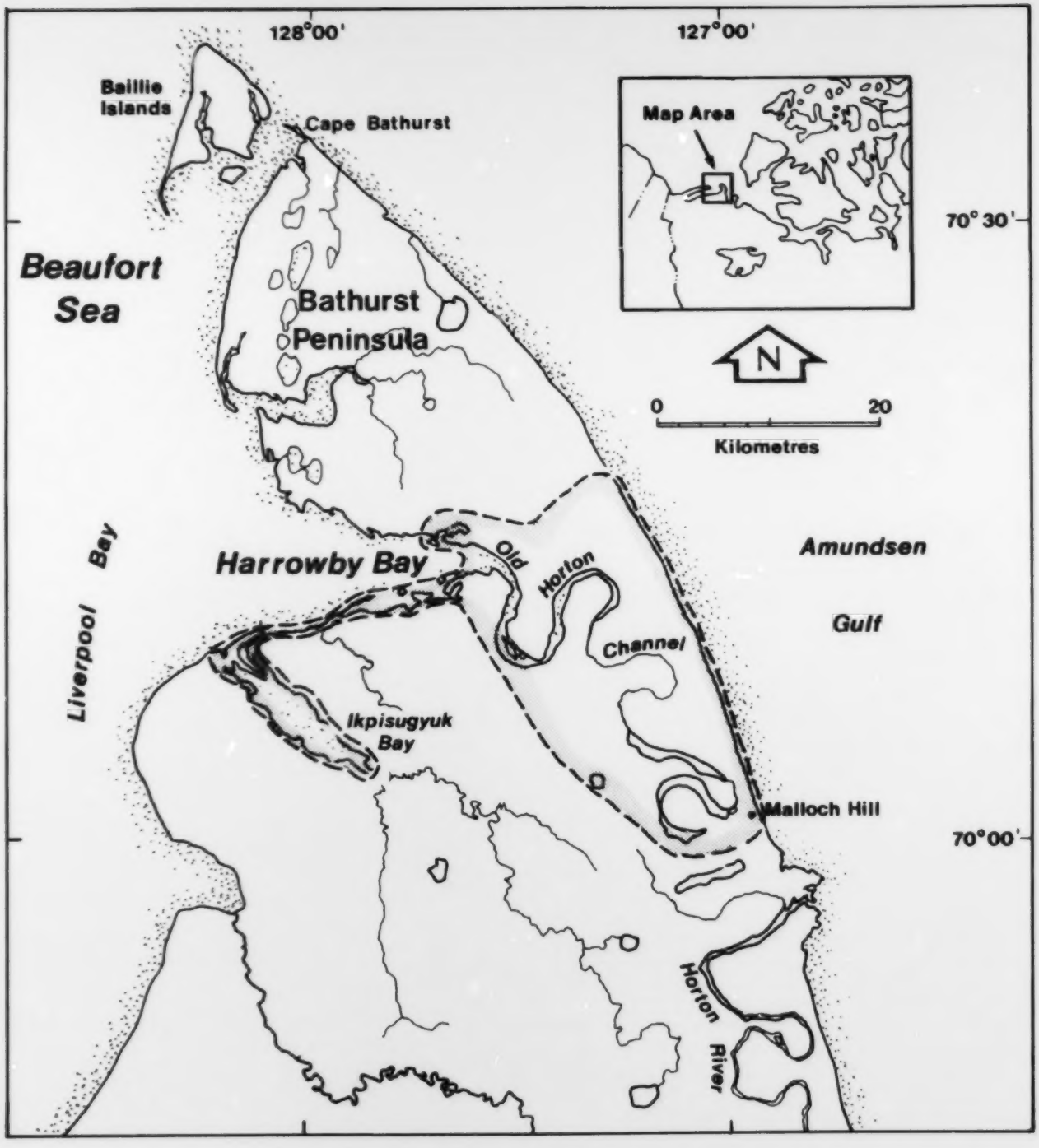
128°00'
127°00'
Baillie Islands
Cape Bathurst
Map Area
70° 30'
Beaufort Sea
Bathurst Peninsula
N
0
20
Kilometres
Harrowby Bay
Old Horton Channel
Amundsen Gulf
Liverpool Bay
Ikpisugyuk Bay
Malloch Hill
70°00'
Horton River

Site 4: Harrowby Bay

Location: 70°10′N, 127°20′W **Size: 630 km²**

Description

Harrowby Bay opens into the Beaufort Sea on the western side of the Bathurst Peninsula. This bay is the original outlet of the Horton River, which, around 1800, broke through its former channel and created a new outlet and delta on the east side of the peninsula.

Recent alluvial deposits cover the area around the bay and to the north, and Cretaceous shale forms the bedrock to the south (Yorath et al. 1975). The north shore consists of low sea bluffs and gravel and sand beaches and spits, whereas the south shore is marshy. Inland from southern barrier beaches, the land rises in a series of terraces to the upland plateau that surrounds the shallow, muddy Ikpisugyuk Bay. This bay empties into Liverpool Bay along high mud bluffs near the western entrance of Harrowby Bay.

The old Horton River valley, which consists of oxbow lakes and channels, is well vegetated with sedges and grasses.

Biological value

From late June until early August, the old Horton River bed provides habitat for 10 000 to 20 000 moulting, nonbreeding Canada Geese (Short-grass Prairie; subspecies *parvipes* and *hutchinsii*) and 5000 to 15 000 moulting Greater White-fronted Geese (Alexander et al. 1988). These numbers represent between 2 and 5% of the *parvipes* and *hutchinsii* populations and between 4 and 11% of the Greater White-fronted Goose western mid-continent population in Canada. The delta at the east end of Ikpisugyuk Bay is also used by up to 1000 moulting Greater White-fronted Geese (Alexander et al. 1988).

In years when spring snow conditions were poor on Banks Island (see Key Habitat Site 6), up to 5000 Lesser Snow Geese have nested on the northeast coast of Harrowby Bay. This area is also used by migrating geese in late August and early September (Barry and Barry 1982).

Several thousand Oldsquaws, scoters, and (sometimes) scaup moult in the waters of Harrowby Bay. Small numbers of Glaucous Gulls breed in the area (Alexander et al. 1988).

Caribou from the Bluenose herd frequent the Bathurst Peninsula. Barren-ground grizzly bears den in the area, and polar bears frequent the leads north of the peninsula. Bearded and ringed seals occur in Harrowby Bay in the summer, and white and bowhead whales spend the summer in Franklin Bay (see Key Habitat Site 5), east of Bathurst Peninsula (Speller 1975; Barry 1982).

Sensitivities

The lowland habitats are susceptible to terrain disturbance. Geese are sensitive to disturbance, particularly during the moulting period.

Potential conflicts

None.

Status of Key Habitat Site

No special status.

References

Alexander, S.A.; Barry, T.W.; Dickson, D.L.; Prus, H.D.; Smyth, K.E. 1988. Key areas for birds in coastal regions of the Canadian Beaufort Sea. Can. Wildl. Serv., Edmonton. 146 pp.

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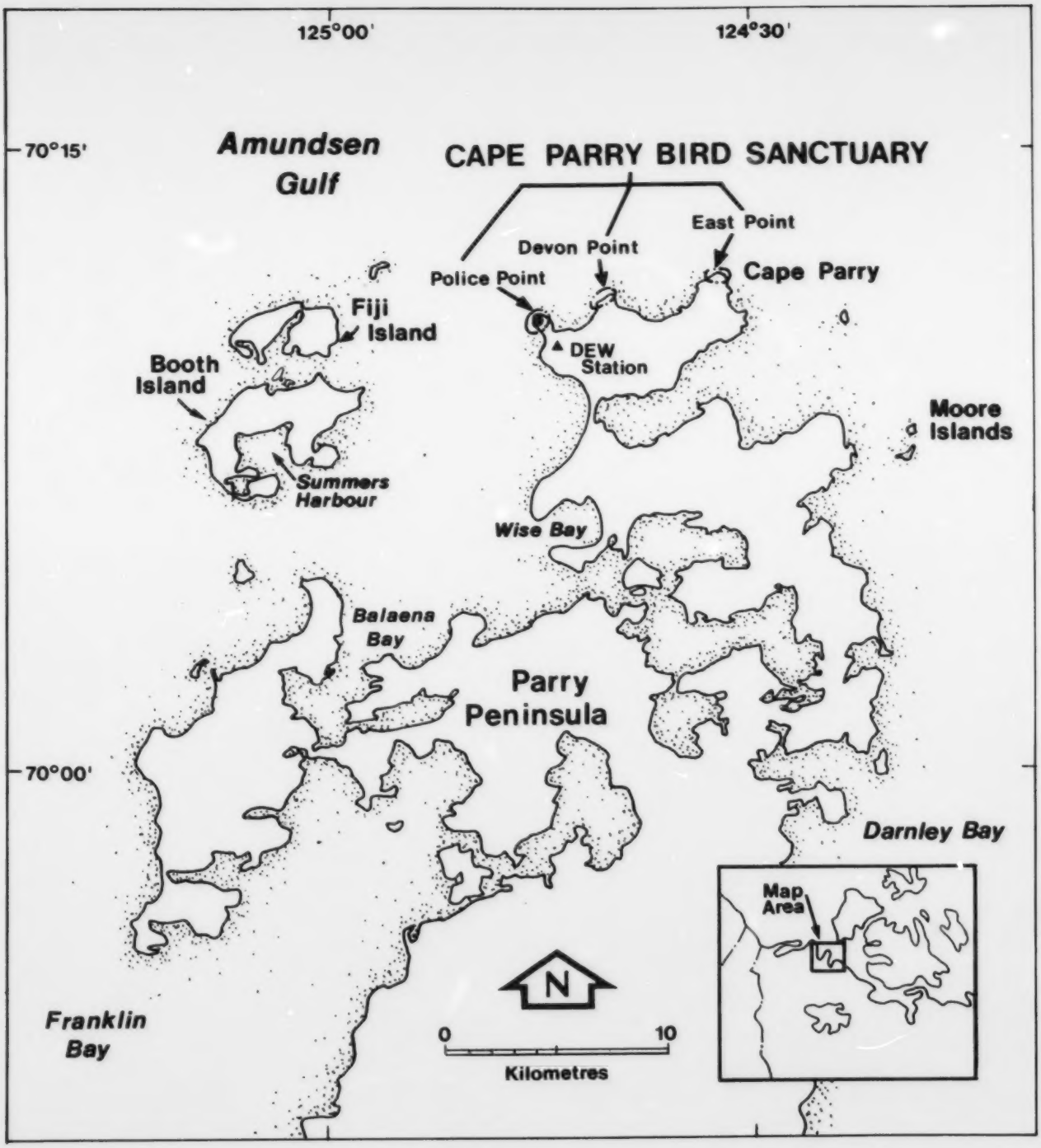
Yorath, C.J.; Balkwill, H.R.; Klassen, R.W. 1975. Franklin Bay and Malloch Hill map-areas, District of Mackenzie. Paper 74-36, Geol. Surv. Can., Ottawa. 35 pp.


125°00'
124°30'
70°15'
70°00'
Amundsen Gulf
CAPE PARRY BIRD SANCTUARY
East Point
Devon Point
Police Point
Cape Parry
Fiji Island
Booth Island
DEW Station
Moore Islands
Summers Harbour
Wise Bay
Balaena Bay
Parry Peninsula
Darnley Bay
Map Area
N
0
10
Kilometres
Franklin Bay

Site 5: Cape Parry

Location: 70°12′N, 124°40′W **Size: 2.3 km²**

Description

Cape Parry is situated in Amundsen Gulf, approximately 100 km north of Paulatuk, at the northern extremity of the Parry Peninsula.

The underlying limestone forms three outcrops of coastal cliffs that rise 20 m above sea level. The coastline has beaches of sand and gravel and is deeply incised, forming numerous bays and small inlets. The peninsula is sparsely vegetated and is dotted with small lakes and ponds.

Upwelling currents provide a rich marine environment where Cape Parry juts into Amundsen Gulf and separates Franklin Bay from Darnley Bay. These currents also produce open water or leads in the ice near the cape and islands. This polynya was more regular prior to 1970 but is still sufficiently persistent to produce open water in June (Barry and Barry 1982).

The extent of the Key Habitat Site is delimited by the boundary of Cape Parry Bird Sanctuary.

Biological value

The coastal limestone cliffs at Cape Parry provide nesting habitat for the only Thick-billed Murre colonies in the western Canadian Arctic. The main colony, located on Police Point (also called West Point), numbered approximately 800 birds in 1979 (Johnson and Ward 1985). Secondary colonies are located at Devon Point (also called Central Point) and East Point, but murres do not use these areas every year. The colonies at Cape Parry are at least 1300 km from the nearest murre colony to the west in Alaska or to the east at Prince Leopold Island (see Key Habitat Site 23). Cape Parry supports the only known breeding colony of the subspecies *Uria lomvia arra* in Canada.

A few pairs of Black Guillemots have been observed and are suspected to nest on the cliffs and on nearby Fiji Islands (Barry et al. 1981; Johnson and Ward 1985). Herschel Island, Yukon Territory, is the only other known nesting site for Black Guillemots in the western Arctic (Alexander et al. 1988a).

In some years, up to 20 000 King Eiders, Common Eiders, and Oldsquaws may stage in the offshore leads around Cape Parry during spring migration. Common Eiders also nest on the islands and beaches of Parry Peninsula. Glaucous Gulls are also abundant, and Yellow-billed Loons are common in spring (Barry and Barry 1982; Alexander et al. 1988b).

The offshore area, particularly the leads north of the cape, is important for bearded seals, ringed seals, polar bears, white whales, and bowhead whales. Grizzly bears are occasionally observed on the mainland.

Sensitivities

Seabirds are sensitive to disturbance and pollution in marine areas.

Potential conflicts

A Distant Early Warning (DEW) station is situated approximately 5 km from the cliffs and has been active since 1955. Low numbers of murres at the Cape Parry colony coincided with a period when garbage from the DEW station was bulldozed over the cliffs. At that time, there was also a nearby Inuit community (before Paulatuk was established in the late 1960s). At present, the station's sea-lift beach and staging area is about 1 km from the sanctuary. In the early 1990s, the existing DEW station will be converted into a North Warning System station. This will result in a reduction of personnel in the area from 47 to about 15. Construction may result in some minor disturbance (Monenco-Eyretechnics Group 1987).

Wise Bay on the west side of the Parry Peninsula has been used as a deep-draft harbour for overwintering drillships involved in Beaufort Sea hydrocarbon development. Accelerated exploration and production in the Beaufort Sea could result in greater activity in this area.

Status of Key Habitat Site

Cape Parry Bird Sanctuary.

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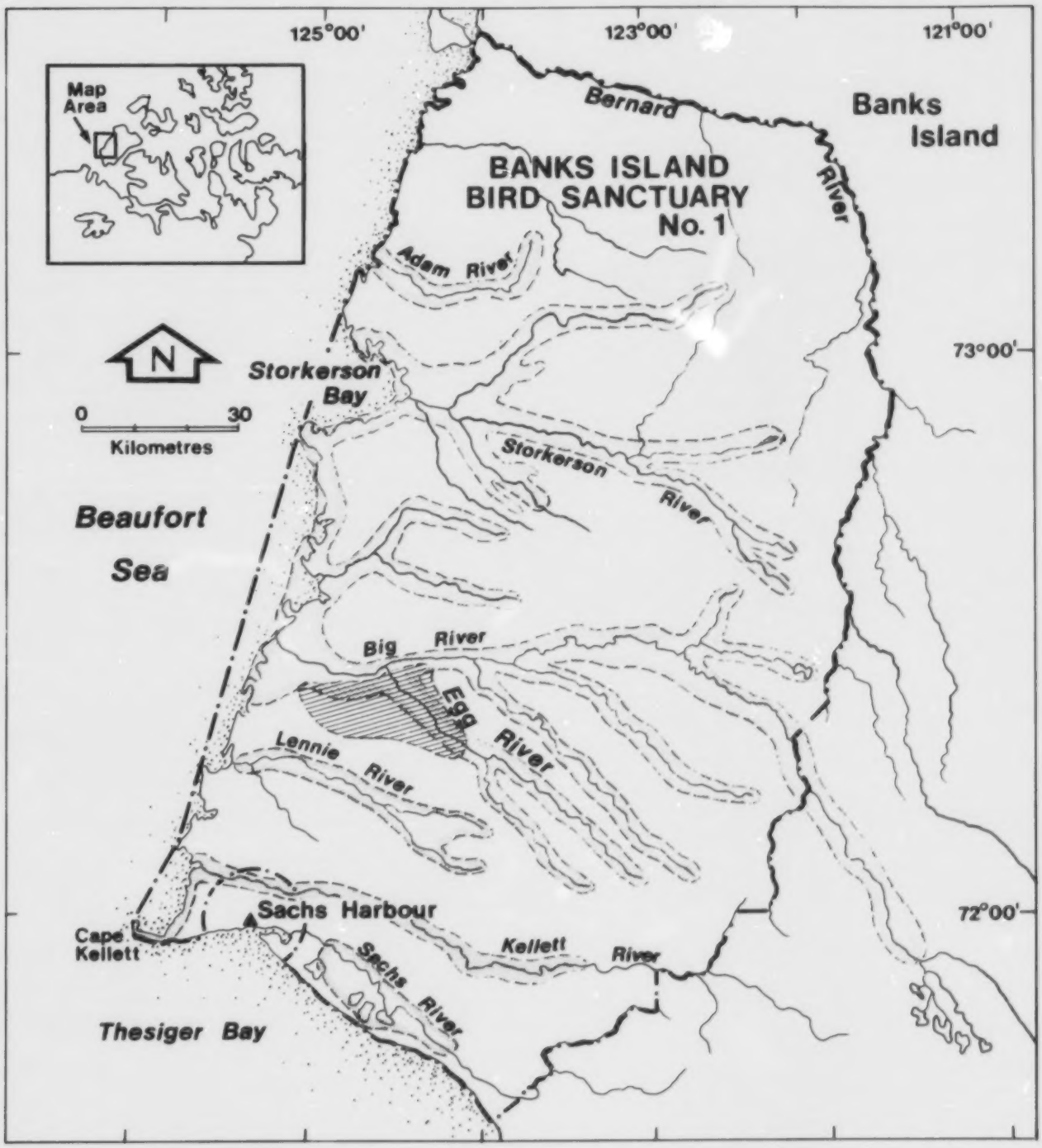
125°00'
123°00'
121°00'
Map Area
Bernard River
Banks Island
BANKS ISLAND BIRD SANCTUARY No. 1
Adam River
N
Storkerson Bay
73°00'
0 30
Kilometres
Storkerson River
Beaufort Sea
Big River
Egg River
Lennie River
Sachs Harbour
72°00'
Cape Kellett
Kellett River
Sachs River
Thesiger Bay

Site 6: Egg River

Location: 72°40′N, 123°30′W **Size: 20 518 km²**

Description

This site is situated in the southwestern quarter of Banks Island, which borders the east side of the Beaufort Sea. The area is composed of gently rolling hills that are drained by several westward-flowing rivers. The main rivers occupy broad valleys of gravelly and sandy alluvium and swampy tundra with shallow ponds and large polygons. In lower reaches, the rivers become highly braided and broaden into deltas as they reach the low-lying coast. Undifferentiated glacial drift and late Tertiary sand and gravel cover much of the area (Thorsteinsson and Tozer 1962).

The valleys in many areas are well vegetated, with grassy marshes in low flat areas and mountain avens and other flowering plants on the drier slopes. Hilltops are predominantly barren.

Open water occurs along the Arctic Ocean shorelead system, off the west coast of Banks Island, between December and July. It may join with leads along the south coast or with a polynya that appears in western Amundsen Gulf off Cape Bathurst (see Key Habitat Site 4) (Stirling and Cleator 1981).

Biological value

The confluence of the Big and Egg rivers is near the core of the largest breeding colony of Lesser Snow Geese in the western Arctic. In 1976, 82 500 pairs occupied 605 km² of tundra; in 1981, 99 100 breeding pairs occupied approximately 170 km² (Kerbes 1986). In 1987, the nesting density had increased further, as 98 250 pairs occupied 109 km² (Kerbes 1988). This represents approximately 96% of the western Arctic population and about 11% of the Canadian breeding population of this subspecies.

The geese arrive in late May. After hatching, they disperse to Storkerson Bay, Bernard River, Lennie River, and up the Big River. A few thousand nonbreeders move to the Thomsen River (see Key Habitat Site 7) to moult from the beginning of July until mid-August. Fall migration begins in late August or early September.

Up to 3000 Black Brant nest in the deltas and on small lakes along the western coast (Barry and Barry 1982). Many thousands of King Eiders and Oldsquaws nest in the area. The number for King Eiders may be as high as 100 000 birds (5–10% of the national population), but systematic survey data are needed to confirm this. Sandhill Cranes and Tundra Swans are common, and Glaucous Gulls, Sabine's Gulls, and Red Phalaropes are abundant nesters in coastal areas (Barry and Barry 1982).

The shorelead off the west coast of Banks Island provides a staging area for tens of thousands of King Eiders and lesser numbers of Common Eiders during spring migration (Barry and Barry 1982; Alexander et al. 1988).

Polar bears are abundant along the west and southwest coasts during the winter. Most maternity dens in the western Arctic occur along these coasts (Stirling et al. 1975). The major winter range of Peary caribou on Banks Island is between the Storkerson and Kellett rivers. The highest density of Arctic fox dens on the island occurs in the dry, hilly country drained by the Storkerson, Big, and Kellett rivers. Muskoxen occur throughout the area.

Sensitivities

Nesting birds are sensitive to disturbance. Low-lying terrain may be damaged by the alteration of natural drainage patterns or the thawing of permafrost.

Potential conflicts

Seismic exploration has previously taken place over much of the island, and a few wells have been drilled in northern areas. The potential for further activity within the site remains.

Status of Key Habitat Site

Most of the Key Habitat Site lies within Banks Island Bird Sanctuary No. 1; IBP Site.

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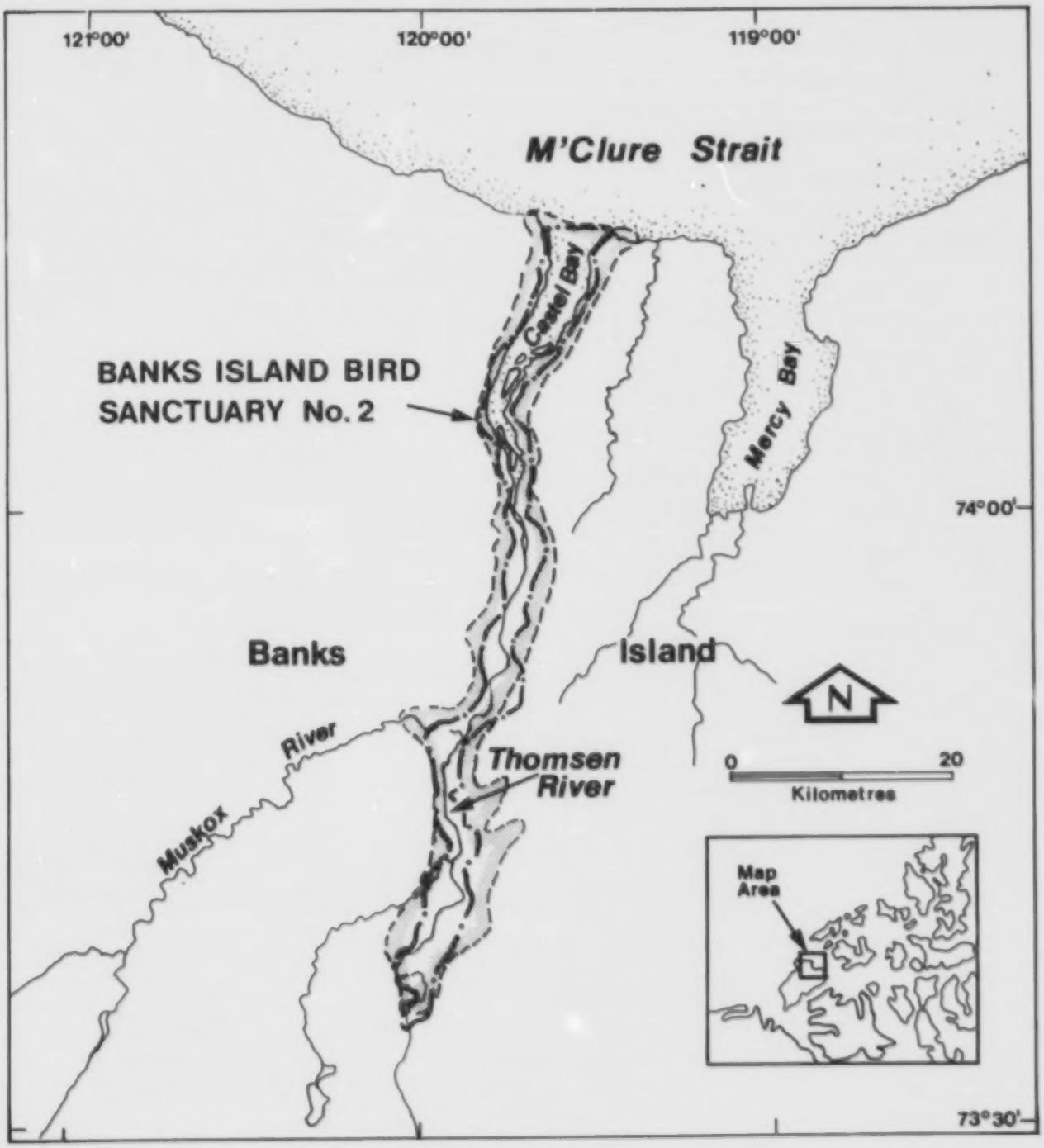
Site 7: Thomsen River



Site 7: Thomsen River

Location: 74°00'N, 119°45'W **Size: 142 km²**

Description

This site is located in north-central Banks Island, which borders the east side of the Beaufort Sea. The Thomsen River flows through a flat-bottomed valley surrounded by low, rolling hills that are dissected by gullies and underlain by Devonian and Cretaceous sandstone and shale. The plain grades to lowlands closer to the coast where the river empties into Castel Bay (Thorsteinsson and Tozer 1962). This area is surrounded by deeply cut badland topography of Tertiary sandstone and shale (Zoltai et al. 1980).

The vegetation is dominated by polar desert and Arctic tundra communities. The main types are dwarf shrub, lichen–legume, and willow–sedge tundra (Zoltai et al. 1980). The valley bottoms of the Thomsen and Muskox rivers support extensive wet sedge meadows, usually in association with low-centre ice-wedge polygons (Ferguson, in press).

Open water appears at the entrance to M'Clure Strait as early as January or February and disappears by July. In some years, the polynya extends as far east as Mercy Bay (Stirling and Cleator 1981).

Biological value

Up to 25 000 Lesser Snow Geese have been reported to moult in the Thomsen River valley from the beginning of July to mid-August (Renewable Resources Consulting Services Ltd. 1972). However, it is not clear how consistently nor to what extent this area is used by moulting geese. T.W. Barry (pers. commun. in Allison 1977) stated that the entire valley is used by moulting Lesser Snow Geese. However, in 1974, Beak Consultants Ltd. (1975) recorded only 730 moulting Snow Geese near Castel Bay and none elsewhere on 28 July, as well as about 1200 flying birds in upper parts of the Thomsen River valley on 11 August (Castel Bay was not surveyed). They saw no birds on the lower Thomsen River on 5 and 9 August. Furthermore, in 1988 and 1989, researchers working on muskoxen in a large area near the confluence of the Muskox and Thomsen rivers did not see any Snow Geese during the moulting period (July), but several hundred were observed in late August 1988, feeding in wet sedge meadow habitats along these river valleys (B. McLean, pers. commun.). Past reports indicate that most of the Snow Geese are nonbreeders, although sometimes a few adults and young are present (Allison 1977).

Castel Bay and the lower Thomsen River provide habitat for up to 5000 moulting Black Brant, which is about 12% of the national population. Two hundred and fifty moulting Canada Geese have also been noted on the river (Beak Consultants Ltd. 1975).

Muskoxen are common in this area throughout the year. Peary caribou migrate north in late spring, many moving to the calving grounds in the northeast and northwest parts of the island (Urquhart 1973). Arctic foxes are common in the area, and polar bears are occasionally seen along the northern coast.

Sensitivities

Moulting geese are sensitive to disturbance.

Potential conflicts

Seismic exploration has occurred over most of the area. Unsuccessful wildcat wells have been drilled to the east and to the west of the site. The potential for further activities is currently unclear.

Status of Key Habitat Site

Banks Island Bird Sanctuary No. 2; proposed national park on northern Banks Island.

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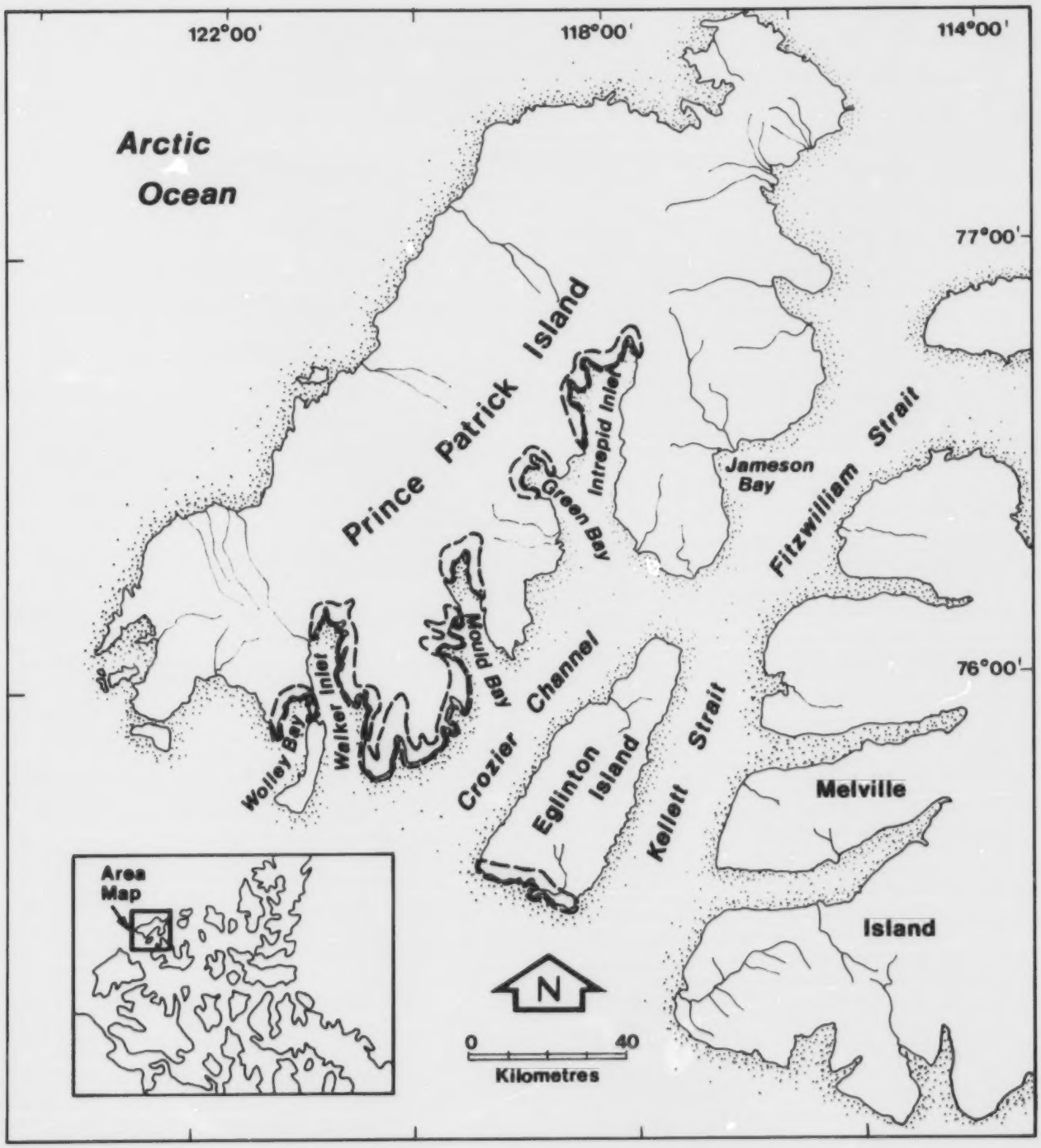
Site 8: Prince Patrick Island



Site 8: Prince Patrick Island

Location: 76°15′N, 119°30′W **Size: 1115 km²**

Description

Prince Patrick Island lies at the western edge of the Queen Elizabeth Islands. Eglinton Island, which lies between Prince Patrick and Melville islands, is surrounded by Crozier Channel to the west and Kellett Strait to the east. The site includes the lowlands at the head of Wolley Bay, the coastal areas of Walker Inlet, Mould Bay, and Intrepid Inlet, and the southern coast of Eglinton Island.

Devonian bedrock surrounds much of Wolley and Mould bays (Tozer and Thorsteinsson 1964), whereas Jurassic and Cretaceous sandstones and shales predominate near Intrepid Inlet. Unlike most of the island, south and southeastern Prince Patrick Island exhibits pronounced relief. Escarpments, sandstone bluffs, and sea cliffs reach elevations of 80 m above sea level (Miller et al. 1977). Southern Eglinton Island has limited relief.

Vegetation is sparse throughout most of the island, and many areas approach polar desert conditions (Tozer and Thorsteinsson 1964). The lowland tundra sites are more heavily vegetated and support habitats of grasses, mosses, and sedges (MacDonald 1954).

A meteorological station with an airstrip is situated at Mould Bay.

Biological value

The coastal lowlands are important nesting and moulting areas for Brant. Handley (1950) suggested that both subspecies (*nigricans* and *hrota*) occurred on Prince Patrick Island. It now appears that these Brant are a distinct and homogeneous local group, intermediate in appearance between Atlantic and Black brant (Boyd and Maltby 1979; Shields 1990). This grey-bellied, high-Arctic segment of the Black Brant population nests on Prince Patrick and Melville islands and is estimated to consist of fewer than 20 000 individuals (Reed et al. 1989).

In 1973, approximately 530 Brant (breeders and nonbreeders) were noted between Wolley Bay and Intrepid Inlet. In 1974, approximately 2600 moulting birds were observed in the same areas, and a further 855 birds were noted along the southern coast of Eglinton Island. Few Brant nested during the 1974 season (Boyd and Maltby 1979).

Reliable and up-to-date estimates of the size of the Brant population breeding on Prince Patrick and Melville islands are needed, particularly as available evidence suggests that numbers on their principal wintering grounds (Puget Sound, Wash.) have fallen considerably since 1974 (H. Boyd, pers. commun.). Black Brant numbers have also declined at the major breeding grounds in the Yukon–Kuskokwim Delta in western Alaska (King and Derksen 1986).

Brant arrive by early June (MacDonald 1954). Fall migration begins by early August and continues until the end of the month (Handley 1950).

These areas are also used by Peary caribou, mainly in the summer months. The largest concentrations of muskox on Prince Patrick Island were noted in the Mould Bay–Intrepid Inlet area (Miller et al. 1977). Ringed seals are common in the offshore waters of Fitzwilliam Strait (Beak Consultants Ltd. 1975).

Sensitivities

Brant are sensitive to disturbance and degradation of their lowland habitats.

Potential conflicts

Seismic activity and some drilling have occurred throughout the area (Beak Consultants Ltd. 1975).

Status of Key Habitat Site

No special status.

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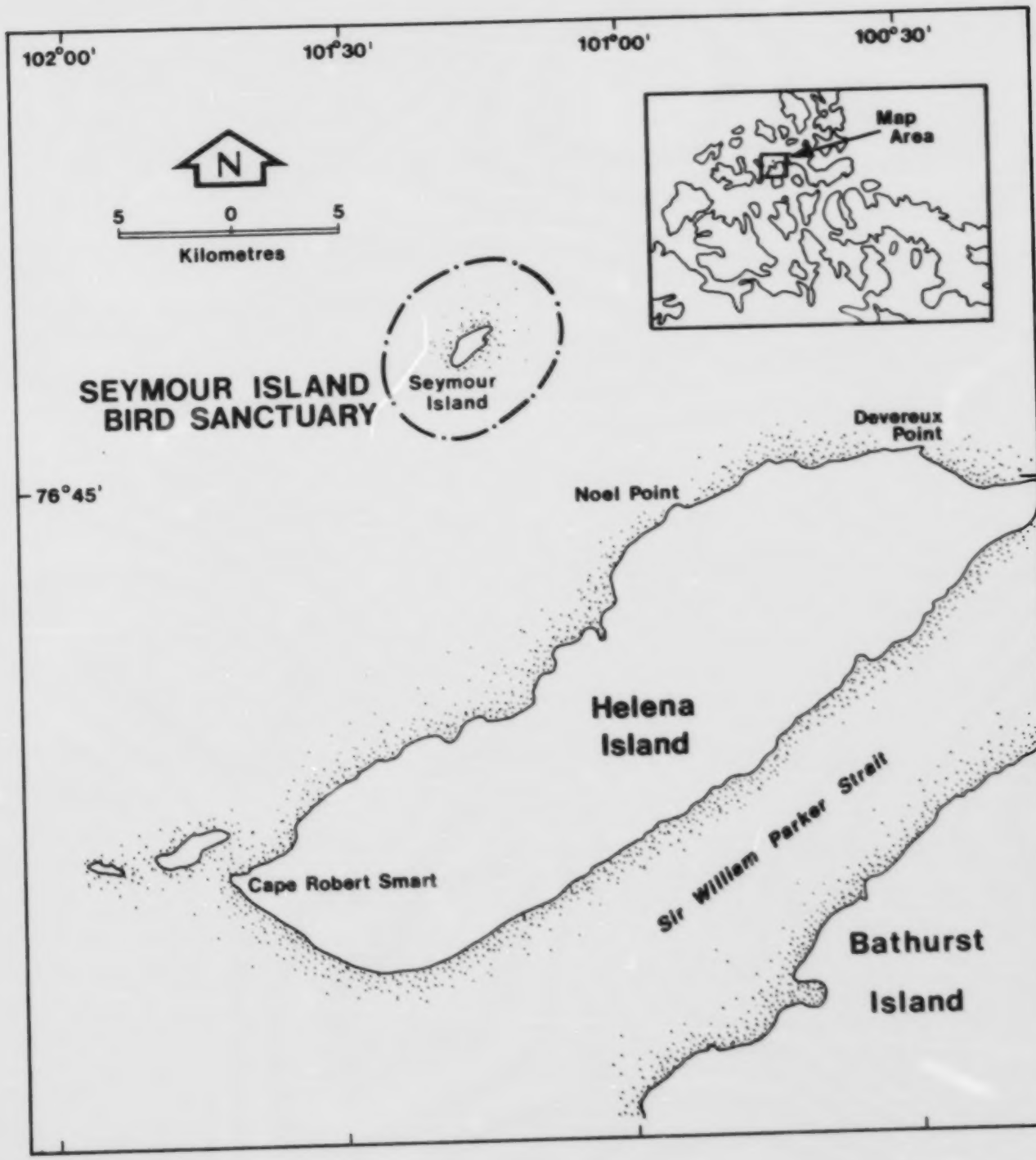
Site 9: Seymour Island



Site 9: Seymour Island

Location: 76°48′N, 101°16′W **Size: 8 km²**

Description

Seymour Island, located approximately 30 km to the north of Bathurst Island, "appears as a tiny reef-like projection above the pack-ice in the Berkeley Group of islands" (Nettleship and Smith 1975). It is less than 3 km long and has a maximum elevation of 28 m. Raised beaches occur over much of the island, and several freshwater ponds are present. The sparse vegetation cover consists primarily of mosses and lichens, along with sedges and grasses.

The extent of the Key Habitat Site is delimited by the boundary of Seymour Island Bird Sanctuary.

Biological value

Seymour Island provides habitat for about 150 breeding pairs of Ivory Gulls (MacDonald 1976), which represents over 12% of the known breeding population in Canada. This site is also a unique breeding habitat for Ivory Gulls in Canada. Unlike all other colonies, which occur on nunataks in glacier fields or on rocky limestone plateaus, the birds in this colony breed on raised beaches.

Ivory Gulls occupy this site from the end of May to September (MacDonald 1976).

The Ivory Gull is a rare bird in Canada (MacDonald 1978).

Sensitivities

Ivory Gulls are intolerant of disturbance during the breeding season. Aircraft or human interference could seriously jeopardize their breeding success and the future of the colony. Sheltered bays and ponds on the island that are used as feeding areas could be adversely affected by oil spills.

Potential conflicts

Increased hydrocarbon exploration in the area could significantly increase marine and air traffic about the island.

Status of Key Habitat Site

Seymour Island Bird Sanctuary; IBP Site.

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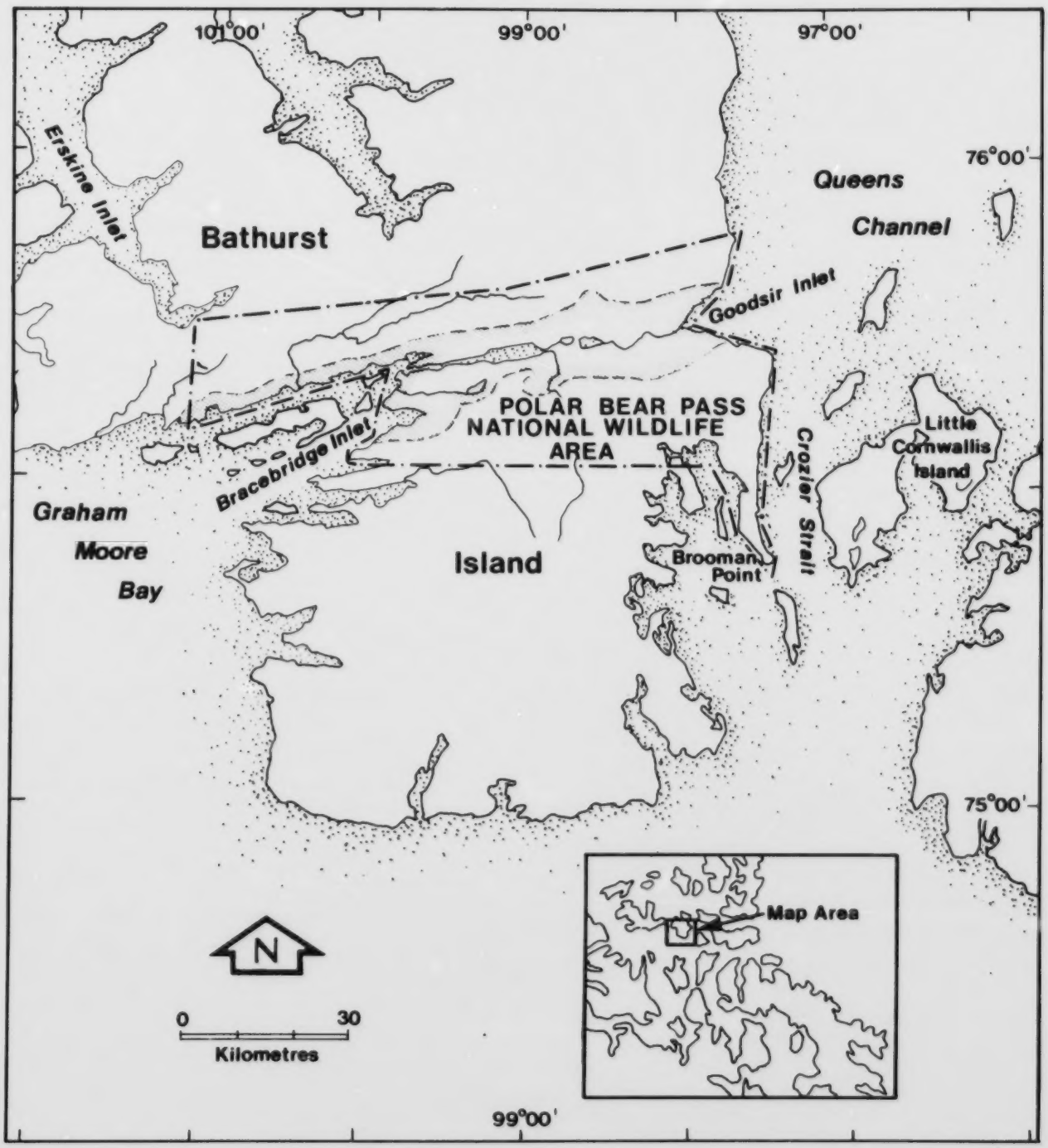
101°00'
99°00'
97°00'
76°00'
75°00'
99°00'
Erskine Inlet
Bathurst
Queens
Channel
Goodsir Inlet
POLAR BEAR PASS
NATIONAL WILDLIFE
AREA
Bracebridge Inlet
Crozier Strait
Little
Cornwallis
Island
Graham
Moore
Bay
Island
Brooman
Point
N
0
30
Kilometres
Map Area

Site 10: Polar Bear Pass

Location: 75°43'N, 98°40'W **Size: 810 km²**

Description

The area designated as Polar Bear Pass encompasses the lowlands between Bracebridge Inlet and Goodsir Inlet, Bathurst Island.

The hills north of this lowland valley are of Ordovician to Devonian origin and consist mainly of limestones and shales (Blake 1964). Polar Bear Pass consists of numerous tundra ponds and lakes and vegetated stream valleys. The lowlands are characterized by permafrost features, including frost mounds, low- and high-centred polygons, and other forms of patterned ground. Vegetation in the low-lying areas consists of lichens interspersed with mosses, grasses, sedges, and flowering plants. Higher elevations approach polar desert conditions, being almost devoid of vegetation. Large areas of fellfields and limestone felsenmeers are common.

Several archaeological sites of the Thule culture are found within the site. Since 1968, the Canadian Museum of Nature (formerly the National Museum of Natural Sciences) has operated a research station in the area, providing valuable long-term information on the dynamics of a high-Arctic ecosystem.

Biological value

Polar Bear Pass is a relatively large and isolated wetland ecosystem at a latitude dominated by polar desert. It is for this reason that Polar Bear Pass has received recognition as a Wetland of International Importance and has been established as a National Wildlife Area. Fifty-four species of birds have been recorded at Polar Bear Pass, 30 of which also nest there (S. MacDonald, pers. commun.). Representative species include King Eider, Greater Snow Goose, Thayer's Gull, Parasitic, Long-tailed, and Pomarine jaegers, Red Phalarope, Sanderling, and Black-bellied Plover. The Red Phalarope is perhaps the most abundant nesting bird on the lowland, although the abundance of all birds is highly variable between years (Mayfield 1983). The Brant that breed in Polar Bear Pass winter in Ireland (Boyd and Maltby 1979).

Lemmings, Arctic fox, muskoxen, and Peary caribou are the most abundant of eight mammal species found on the site (Nettleship and Smith 1975). In spring and summer, polar bears regularly pass through the area en route to Graham Moore Bay, which is an important feeding area (Stirling et al. 1979). Ringed seals and walruses occur in offshore waters (Finley et al. 1974), and walruses haul out on Brooman Point.

Sensitivities

The wetland area is susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Wildlife in the area are sensitive to disturbance.

Pollution of offshore waters would result in the degradation of marine habitats.

Potential conflicts

None.

Status of Key Habitat Site

National Wildlife Area; Wetland of International Importance; IBP Site. This site has also been "twinned" with three Nature Reserves near Dublin, Ireland, and with a National Trust for Ireland Reserve on Strangford Longh, Northern Ireland — first steps towards the cooperative management of the small, distinct population of Brant that breeds in the Queen Elizabeth Islands and winters in Ireland.

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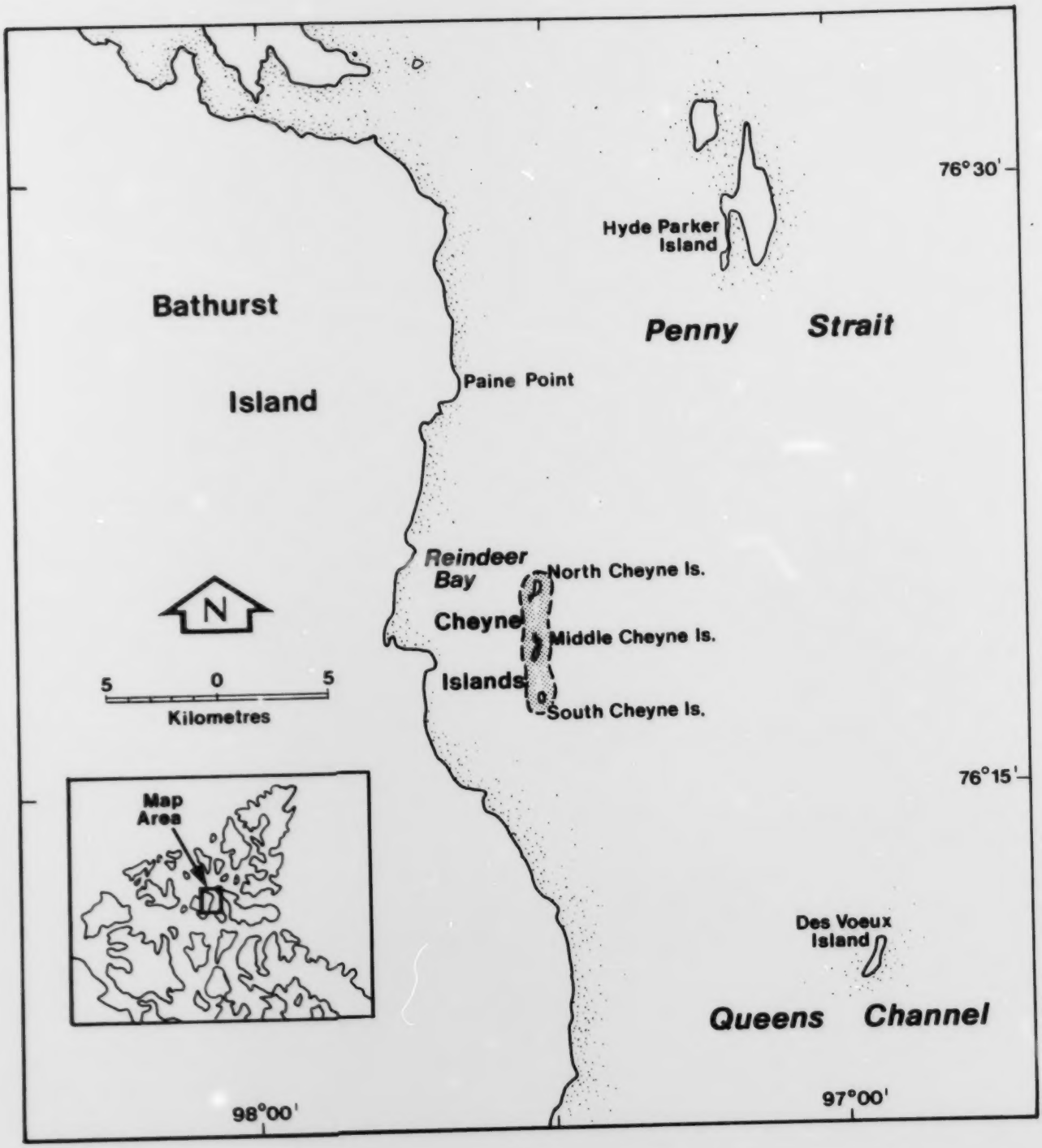
Site 11: Cheyne Islands



Site 11: Cheyne Islands

Location: 76°18′N, 97°30′W **Size: 0.73 km²**

Description

The Cheyne Islands are three small alluvial islands located in Penny Strait about 5 km off the eastern coast of Reindeer Bay, Bathurst Island. They are of low relief; none of the islands exceeds 3 m above sea level.

Several small polynyas develop in May or June along the eastern side of Penny Strait (Stirling and Cleator 1981).

Biological value

The Cheyne Islands support the only confirmed nesting site of Ross' Gulls in the Northwest Territories. In 1976, three pairs nested on the islands; in 1978, six pairs were noted among approximately 20 birds that were present (Macey 1981). Although nests were located in 1976 and 1978, the breeding attempts appeared to be unsuccessful. No nests were found in 1979, but a juvenile was seen flying over Bathurst Island (Macey 1981).

All three islands are used for nesting, although the gulls do not breed regularly in any one place. Unlike other breeding grounds where nests are constructed on marshy tundra, the gulls nest directly on gravel reefs (Macey 1981).

The birds are paired upon arrival in early June (Macey 1981). Nesting is completed by mid-July.

The polynyas are important feeding areas for the gulls (Macey 1981).

Sensitivities

Ross' Gulls are sensitive to disturbance.

Potential conflicts

None.

Status of Key Habitat Site

No special status.

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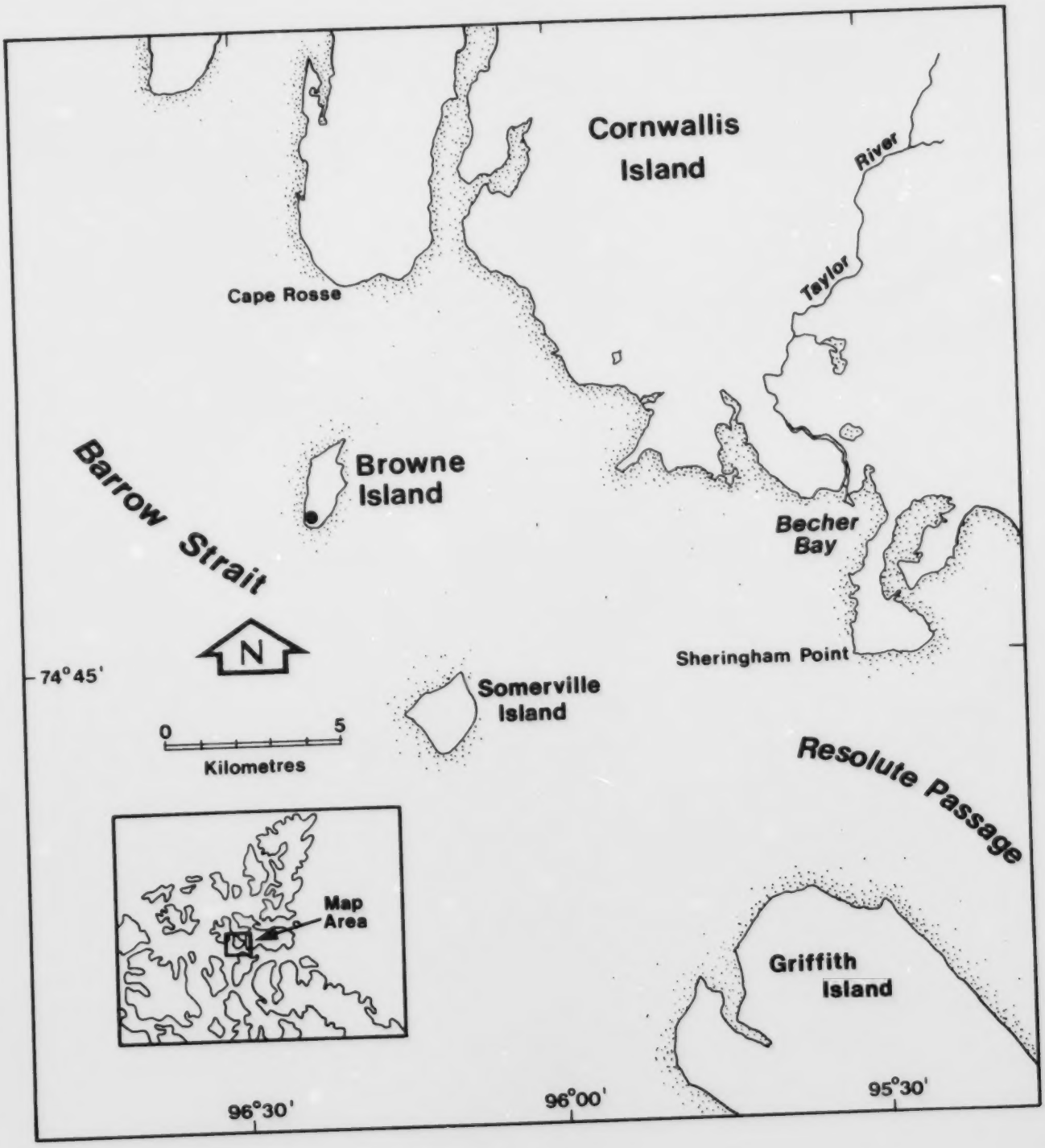
Cornwallis Island
River
Taylor
Cape Rosse
Barrow Strait
Browne Island
Becher Bay
Sheringham Point
N
74°45'
Somerville Island
0
5
Kilometres
Resolute Passage
Map Area
Griffith Island
96°30'
96°00'
95°30'

Site 12: Browne Island

Location: 74°49′N, 96°21′W **Size: 1 km²**

Description

Browne Island is located in western Barrow Strait about 12 km southwest of Cornwallis Island. The southeastern coastline is bordered by cliffs that reach elevations of over 500 m above sea level. Gentle slopes prevail in the north-central part of the island, where raised beach sequences with coarse sands and gravels are common.

Biological value

In 1974, a colony of approximately 2000 pairs of Black-legged Kittiwakes occupied the south face of the island. This number represents approximately 1% of the Canadian population of Black-legged Kittiwakes. However, in 1975, only 500 pairs were present, which seemed to be related to late ice breakup in Barrow Strait (Alliston et al. 1976:299). Further surveys are needed to determine the consistency of use of this colony.

Kittiwakes reach their nesting sites in this area by mid-May. Feeding occurs at ice edges in Barrow Strait where small fish, crustaceans, and marine invertebrates predominate. Most birds have left the area by late September.

Thayer's Gulls and Glaucous Gulls are also found on the island (Alliston et al. 1976). The most abundant marine mammal in offshore waters is the ringed seal, although walruses and polar bears are also present.

Sensitivities

Seabirds are susceptible to disturbance and pollution of offshore waters.

Potential conflicts

None.

Status of Key Habitat Site

No special status.

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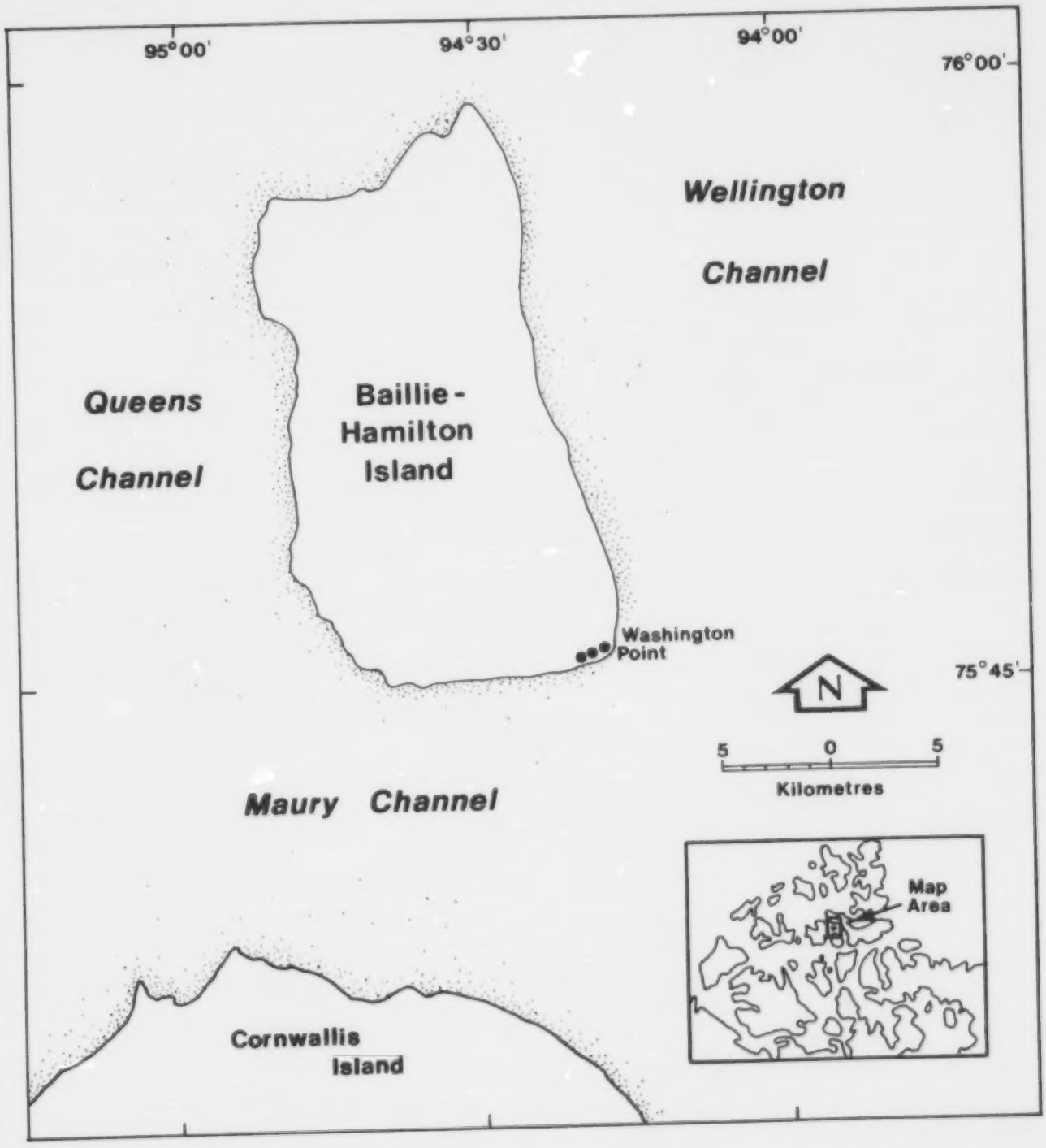
Site 13: Baillie-Hamilton Island



Site 13: Baillie-Hamilton Island

Location: 75°45′N, 94°17′W **Size: 1 km²**

Description

Baillie-Hamilton Island is situated approximately 15 km north of Cornwallis Island. It is a flat-topped island with steep coastal cliffs that reach 215 m above sea level. The cliffs at Washington Point, on the southeast corner, are composed of Lower Devonian limestone (Thorsteinsson 1973).

In January, a polynya develops north of Baillie-Hamilton Island and remains until breakup (Stirling and Cleator 1981).

Biological value

Approximately 3000 pairs of Black-legged Kittiwakes, representing nearly 2% of the Canadian population, nest on the cliffs at Washington Point (Nettleship 1980). This island is one of the most northern kittiwake breeding sites in the eastern Canadian Arctic. The kittiwakes arrive at the nesting cliffs about mid-May and leave by early October (Nettleship and Smith 1975).

A few Glaucous Gulls and Black Guillemots also breed at this site (Nettleship and Smith 1975).

Sensitivities

Disturbance at the colony or pollution of marine foraging areas could adversely affect the birds.

Potential conflicts

None.

Status of Key Habitat Site

IBP Site.

References

Nettleship, D.N. 1976. Studies of seabirds at Prince Leopold Island and vicinity, Northwest Territories. Unpubl. rep., Can. Wildl. Serv., Ottawa. 24 pp.

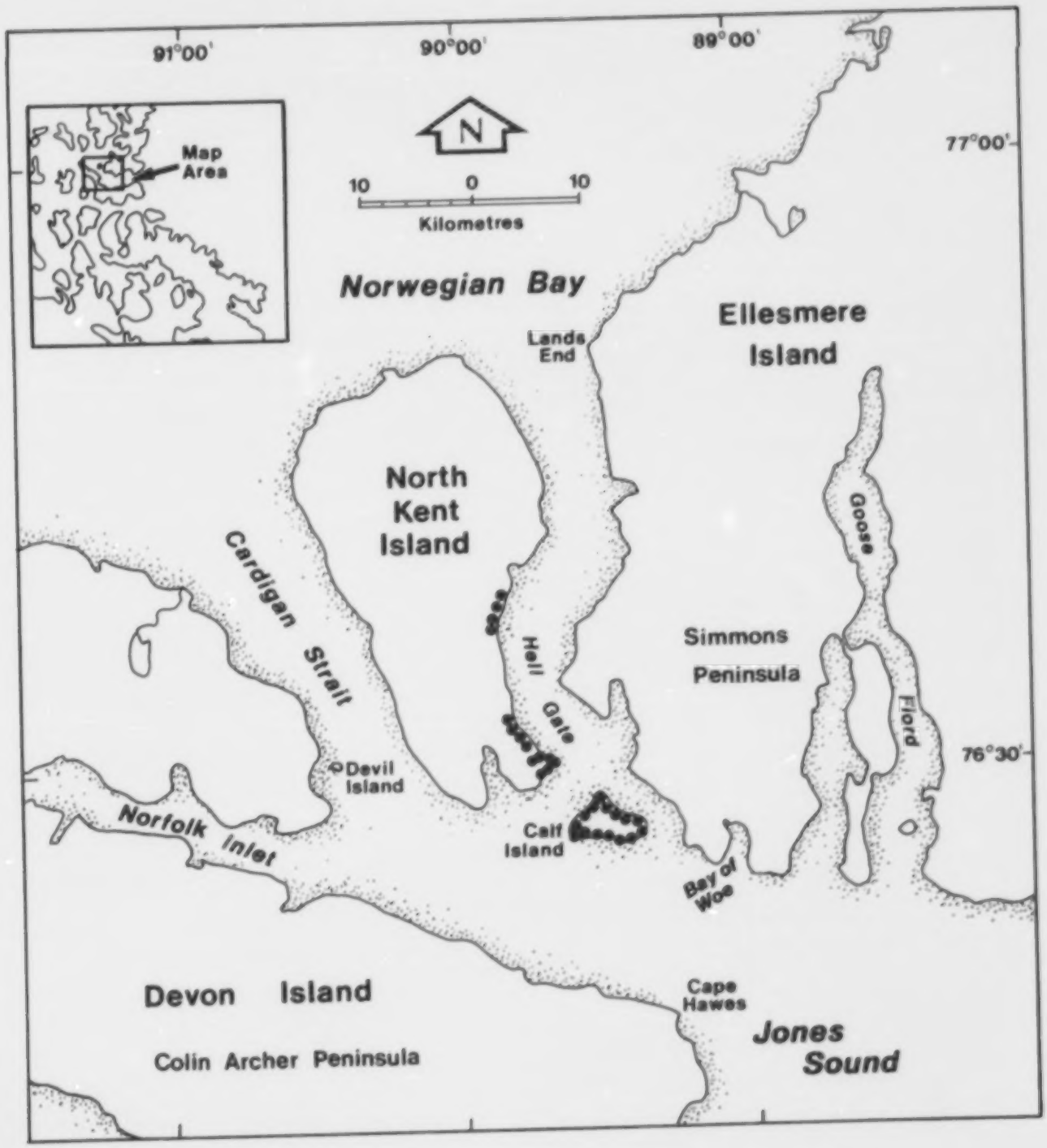
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N.; Smith, P.A. (eds.). 1975. Ecological sites in northern Canada. Can. Comm. Int. Biol. Program, Conserv. Terr., Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Stirling, I.; Cleator, H. (eds.). 1981. Polynyas in the Canadian Arctic. Occas. Pap. No. 45, Can. Wildl. Serv., Ottawa. 70 pp.

Thorsteinsson, R. 1973. Geology of the Baillie-Hamilton Island sheet, NTS 58G. Open File 139, Geol. Surv. Can., Ottawa.

Site 14: North Kent Island



Site 14: North Kent Island

Location: 76°30′N, 89°40′W **Size: 16 km²**

Description

This site includes North Kent Island and Calf Island. North Kent Island lies between Colin Archer Peninsula on northwest Devon Island and Simmons Peninsula on southwest Ellesmere Island. The flat-topped, ice-capped island rises to a maximum height of 600 m above sea level. Steep cliffs occur around most of the island but decrease to a gentle slope at the north end.

Calf Island is a small, table-topped island surrounded by cliffs, situated 5 km southeast of the southern tip of North Kent Island.

Strong currents, flowing from Norwegian Bay to Jones Sound, create a recurring polynya around these islands (Stirling and Cleator 1981).

Biological value

This area may be important for nesting Black Guillemots from May to September. However, the two primary sources of information (Nettleship 1974, 1980; R. Prach, pers. commun.) present very different data.

Approximately 9 km of cliffs along the east side and southeastern end of North Kent Island support the largest concentrations of Black Guillemots on the island. Nettleship's estimate was approximately 3000 pairs, whereas Prach recorded 439 birds in 1984 and 85 birds in 1988.

Another colony occupies the entire periphery of Calf Island. Nettleship's estimate was approximately 5000 pairs, whereas Prach recorded 646 birds in 1984 and 569 in 1988.

By Nettleship's estimates, these colonies could represent as much as 11% of the Canadian Black Guillemot population; by Prach's estimate, however, the representation may be no more than 1%.

It is not clear whether the differences represent real trends in the Black Guillemot population or are simply artifacts of different methods and observers. Surveys by Nettleship were flown in a fixed-wing aircraft in early August 1973, whereas those by Prach were flown in a helicopter in early August 1984 and late July 1988. Prach's data have not been corrected for bias related to aerial surveys and therefore underestimate the actual numbers present. In addition, the relation between number of birds seen and number of pairs present was not taken into account, which also results in an underestimate. On the other hand, Nettleship (1980) indicated that his estimates are provisional and that the total number of nesting pairs is probably between 1000 and 10 000. Thus, data from the two studies are not directly comparable. Clearly, more detailed data are required to determine the current population.

A Common Eider colony of 160 nests occurs on the talus beach at the southwest tip of Calf Island. A few colonies of Glaucous and Thayer's gulls also occur on the island (R. Prach, pers. commun.).

Marine mammals, including walruses, ringed seals, bearded seals, and narwhals, are also attracted to the polynya (Stirling and Cleator 1981).

Sensitivities

Black Guillemots are susceptible to disturbance and pollution of their marine foraging areas.

Potential conflicts

None.

Status of Key Habitat Site

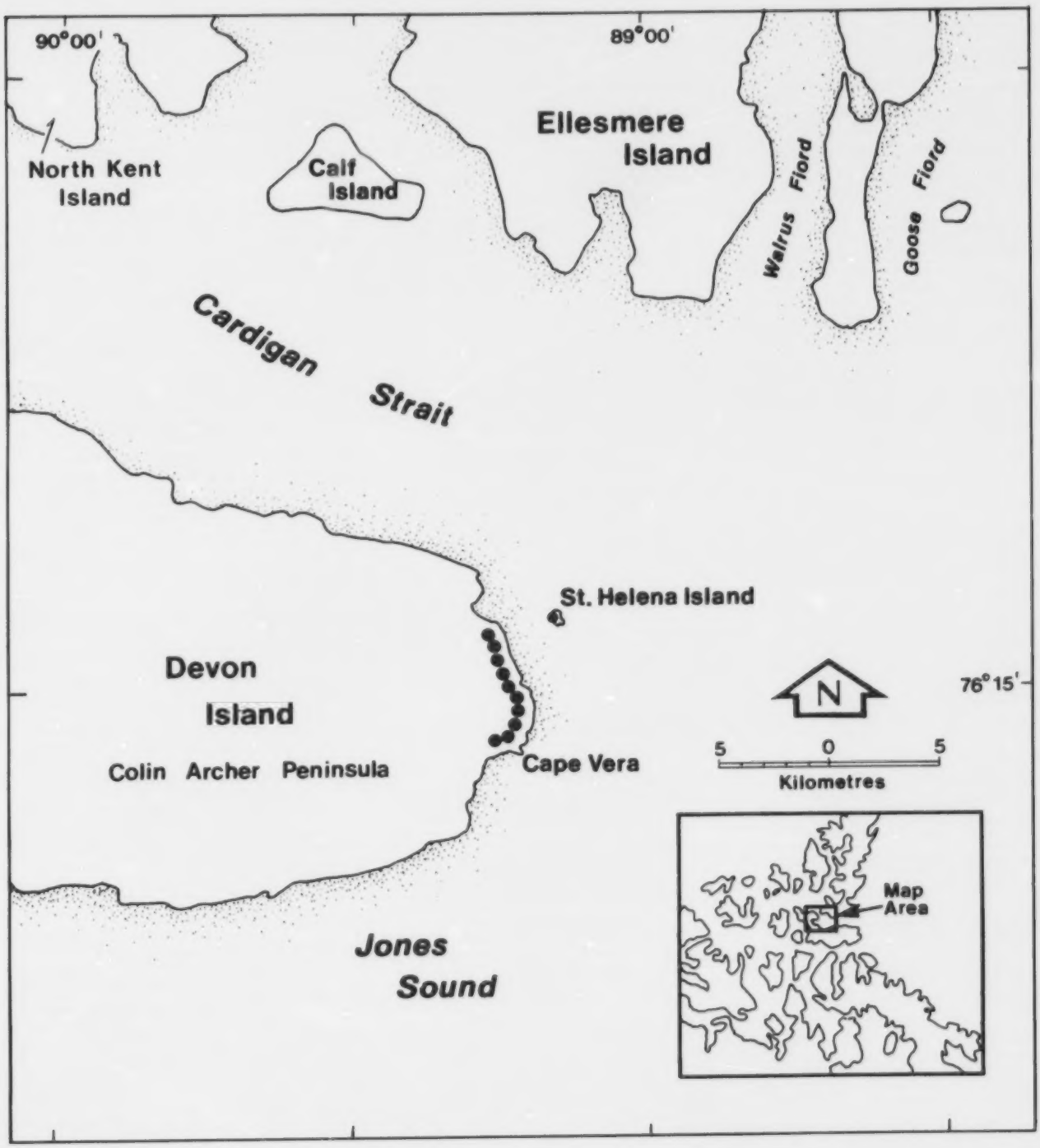
IBP Site.

References

Nettleship, D.N. 1974. Seabird colonies and distributions around Devon Island and vicinity. Arctic 27(2):95–103.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.

Stirling, I.; Cleator, H. (eds.). 1981. Polynyas in the Canadian Arctic. Occas. Pap. No. 45, Can. Wildl. Serv., Ottawa. 70 pp.


90°00'
89°00'
North Kent Island
Calf Island
Ellesmere Island
Walrus Fiord
Goose Fiord
Cardigan Strait
St. Helena Island
Devon Island
Colin Archer Peninsula
Cape Vera
76°15'
N
5 0 5
Kilometres
Map Area
Jones Sound

Site 15: Cape Vera

Location: 76°15′N, 89°15′W **Size: 8 km²**

Description

Cape Vera is situated in western Jones Sound at the tip of Colin Archer Peninsula, northwest Devon Island. It has a prominent cliff coastline that rises to an elevation of 245 m above sea level. A scree beach slopes from the base of the steep cliffs to the seashore.

St. Helena Island is a small, flat-topped island 8 km east of Cape Vera. The topography is a low, rock-shelf escarpment with a small, eastward-facing cliff near the centre.

A polynya occurs in Cardigan Strait, between North Kent Island and Cape Vera, during most of the year (Stirling and Cleator 1981).

There are several archaeological sites near the base of Cape Vera and on St. Helena Island.

Biological value

An estimated 7500 pairs of Northern Fulmars, 2% of the Canadian population, nest on grassy cliff ledges at Cape Vera (R. Prach, pers. commun.). The colony extends along 8 km of cliff face. Northern Fulmars appear in the area in mid-April, and the adults and young leave the breeding cliffs by early October.

The polynya is an important feeding area for the seabirds when they arrive in the area. It is also significant for wintering walruses, ringed seals, bearded seals, and polar bears (Stirling and Cleator 1981).

St. Helena Island, although not a key habitat for any species, is an ornithologically and historically interesting site. The island provides habitat for up to 300 pairs of Northern Common Eiders (Prach et al. 1986), as well as smaller numbers of breeding Glaucous and Thayer's gulls, Arctic Terns, and Black Guillemots (R. Prach, pers. commun.). On the island, there are many rock nest shelters believed to have been constructed by early inhabitants (possibly Vikings) to enhance nesting by eiders (Sverdrup 1904; Porsild 1938).

Sensitivities

Seabirds are sensitive to disturbance and pollution of their marine habitat.

Potential conflicts

None.

Status of Key Habitat Site

IBP Site.

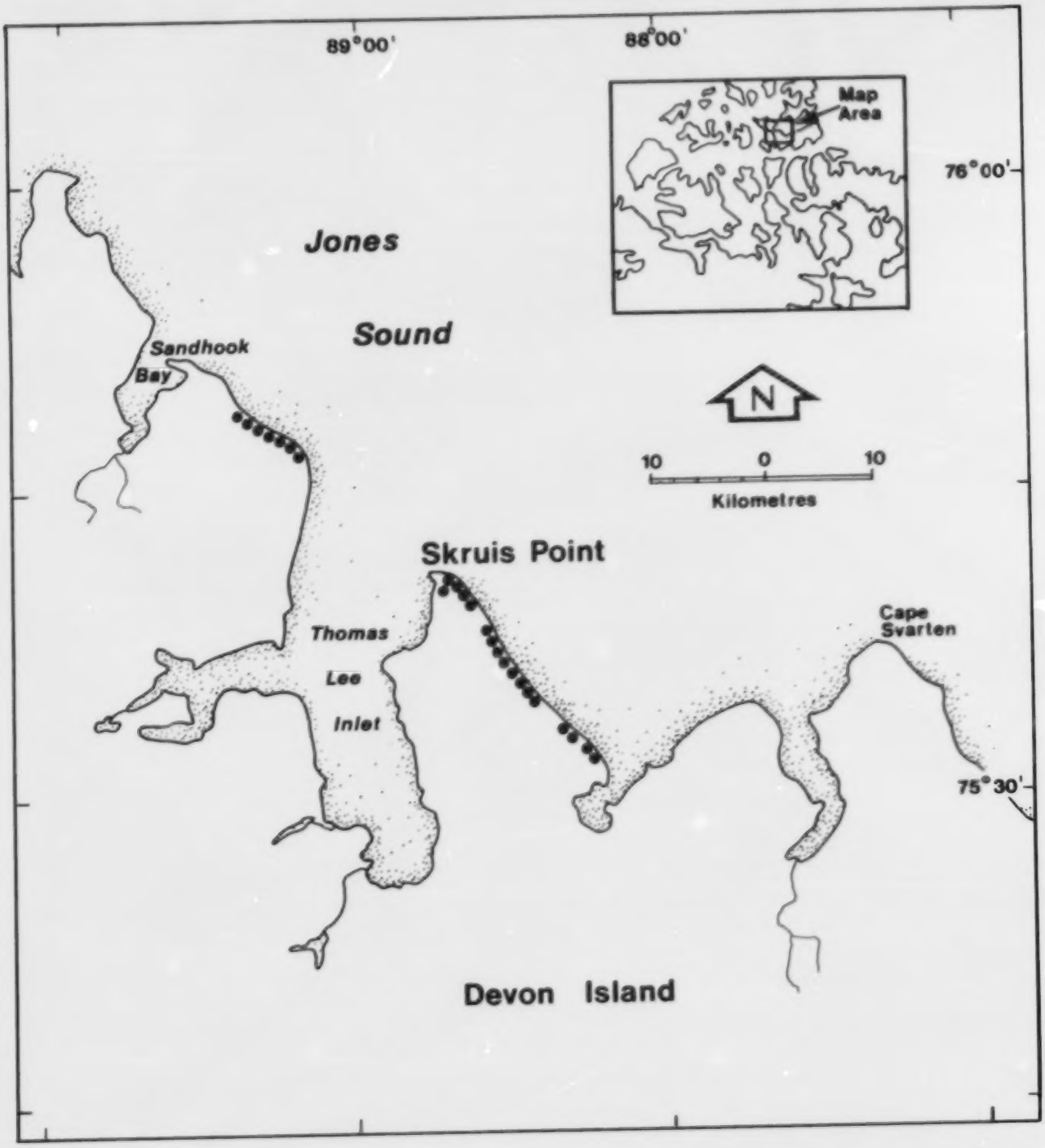
References

Porsild, A.E. 1938. Byggede de gamie nordboer edderfugle varp i Jones Sound? (Did the Old Norse build eider duck shelters in Jones Sound?) Geogr. Tidsskr. 41:147–152. (In Danish with English summary.)

Prach, R.W.; Smith, A.R.; Dzubin, A. 1986. Nesting of the Common Eider near the Hell Gate – Cardigan Strait polynya, 1980–1981. Pages 127–135 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Stirling, I.; Cleator, H. (eds.). 1981. Polynyas in the Canadian Arctic. Occas. Pap. No. 45, Can. Wildl. Serv., Ottawa. 70 pp.

Sverdrup, O.N. 1904. New lands: four years in the arctic regions. Vol. 2. Longmans, Green, London, U.K. 504 pp.


89°00'
88°00'
Map Area
76°00'
Jones
Sound
Sandhook Bay
N
10 0 10
Kilometres
Skruis Point
Thomas Lee Inlet
Cape Svarten
75°30'
Devon Island

Site 16: Skruis Point

Location: 75°40′N, 88°43′W **Size: 31 km²**

Description

Skruis Point lies midway along the north coast of Devon Island. The steep cliffs surrounding Thomas Lee Inlet reach heights of over 150 m in the Skruis Point area. Inland heights range from 75 m at the south end of the site to 230 m in the north.

Biological value

This site, which stretches over 9 km of cliffs along the northwest shore of the inlet and along 22 km of cliff southeast of Skruis Point, contains probably the largest concentration of breeding Black Guillemots in the Northwest Territories. However, there is some uncertainty regarding the number of birds present. Nettleship (1980) provided a provisional estimate of 10 000 pairs (based on surveys in 1973), which would represent about 13% of the Canadian population. More recently, R. Prach (pers. commun.) recorded 1585 and 700 birds in 1984 and 1988, respectively, representing about 1% of the population.

It is not clear whether the differences represent real trends in the Black Guillemot population or are simply artifacts of different methods and observers. Surveys by Nettleship were flown in a fixed-wing aircraft in early August 1973, whereas those by Prach were flown in a helicopter in early August 1984 and late July 1988. Prach's data have not been corrected for bias related to aerial surveys and therefore underestimate the actual numbers present. In addition, the relationship between number of birds seen and number of pairs present was not taken into account, which also results in an underestimate. On the other hand, Nettleship (1980) indicated that his estimates are provisional and that the total number of nesting pairs is probably between 1000 and 10 000, although tending towards the higher end of the range. Thus, data from the two studies are not directly comparable. Clearly, more detailed data are required to determine the current population.

The colony is occupied from mid-May to early September.

This area serves as a maternity denning area and summer retreat for polar bears (Stirling et al. 1979). Other marine mammals, such as ringed seals and walruses, are also common.

Sensitivities

Black Guillemots are susceptible to disturbance at their colony and pollution of their marine feeding areas.

Potential conflicts

None.

Status of Key Habitat Site

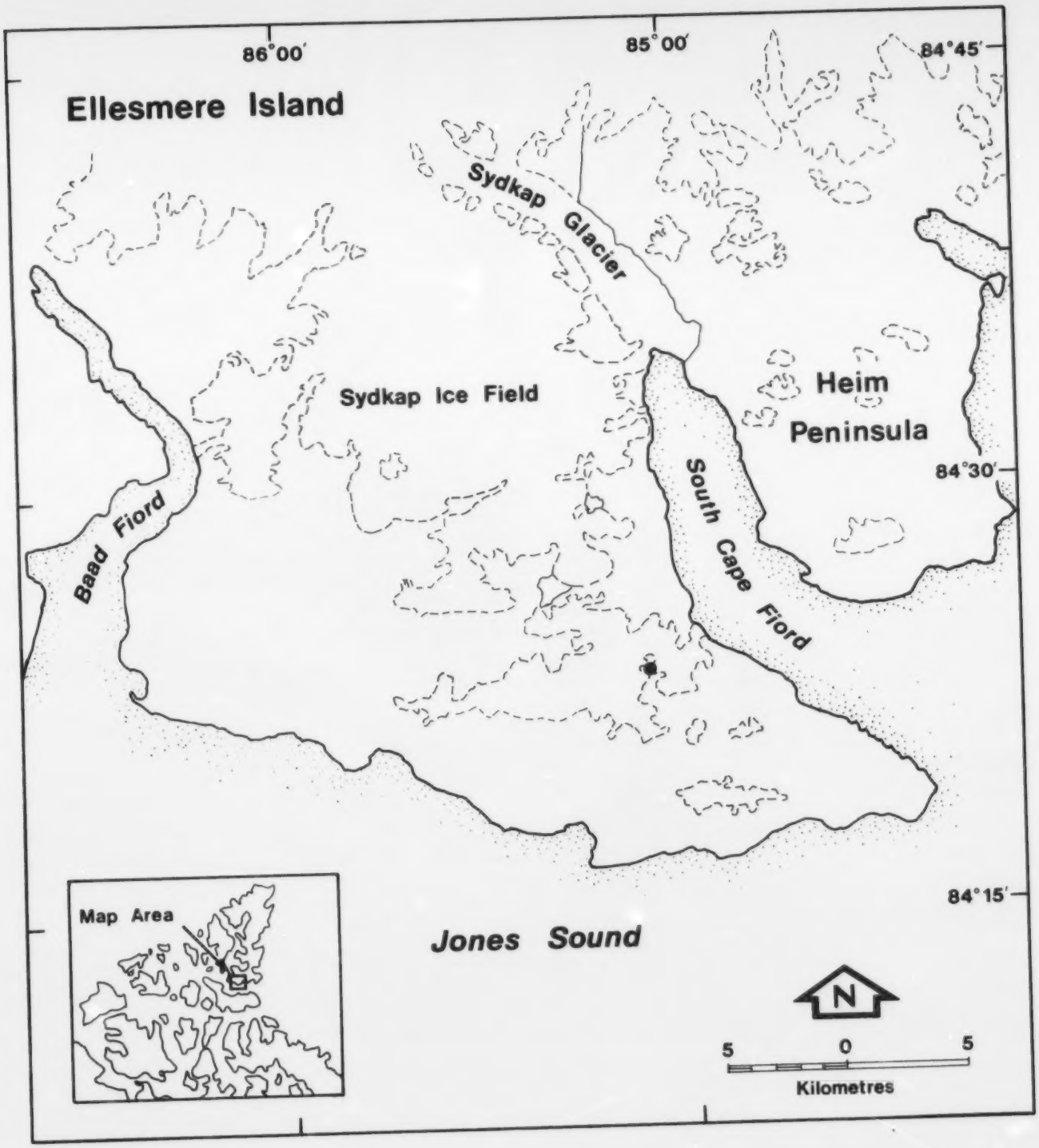
IBP Site.

References

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.

Stirling, I.; Schweinsburg, R.E.; Calvert, W.; Kiliaan, H.P.L. 1979. Population ecology of the polar bear along the proposed Arctic Islands Gas Pipeline route. ESCOM Rep. No. A1-24, Dep. Indian North. Affairs, Ottawa. 93 pp.

Site 17: Sydkap Ice Field



Site 17: Sydkap Ice Field

Location: 76°23′N, 85°6′W **Size: 1 km²**

Description

This site, located on southern Ellesmere Island approximately 50 km west of Grise Fiord, is at the southern edge of the Sydkap ice field. All of the surrounding area is ice cap, except for a narrow tongue of exposed land, composed of eroded limestone plates, that starts at the site and extends to the south (Thomas and MacDonald 1987). The shore of South Cape Fiord is 5 km to the northeast.

Biological value

Approximately 300 Ivory Gulls are known to have bred on the small limestone plateau that comprises this site (Thomas and MacDonald 1987). This represents nearly 12% of the known national breeding population. The number of breeding pairs likely fluctuates between years.

Nests are located on the ground among the limestone plates. The area is devoid of evidence of plants, mammals, and other birds (Thomas and MacDonald 1987). Based on studies at Seymour Island (MacDonald 1976), Ivory Gulls likely occupy the area from late May to late August.

The Ivory Gull is a rare bird in Canada (MacDonald 1978).

Sensitivities

The remoteness of Ivory Gull colonies attests to the intolerance of these birds of disturbance during the breeding season. Aircraft or human interferences could seriously jeopardize their breeding success. Pollution in the polynyas around southern Ellesmere Island, where the birds likely feed, could have serious negative impacts.

Potential conflicts

None.

Status of Key Habitat Site

No special status.

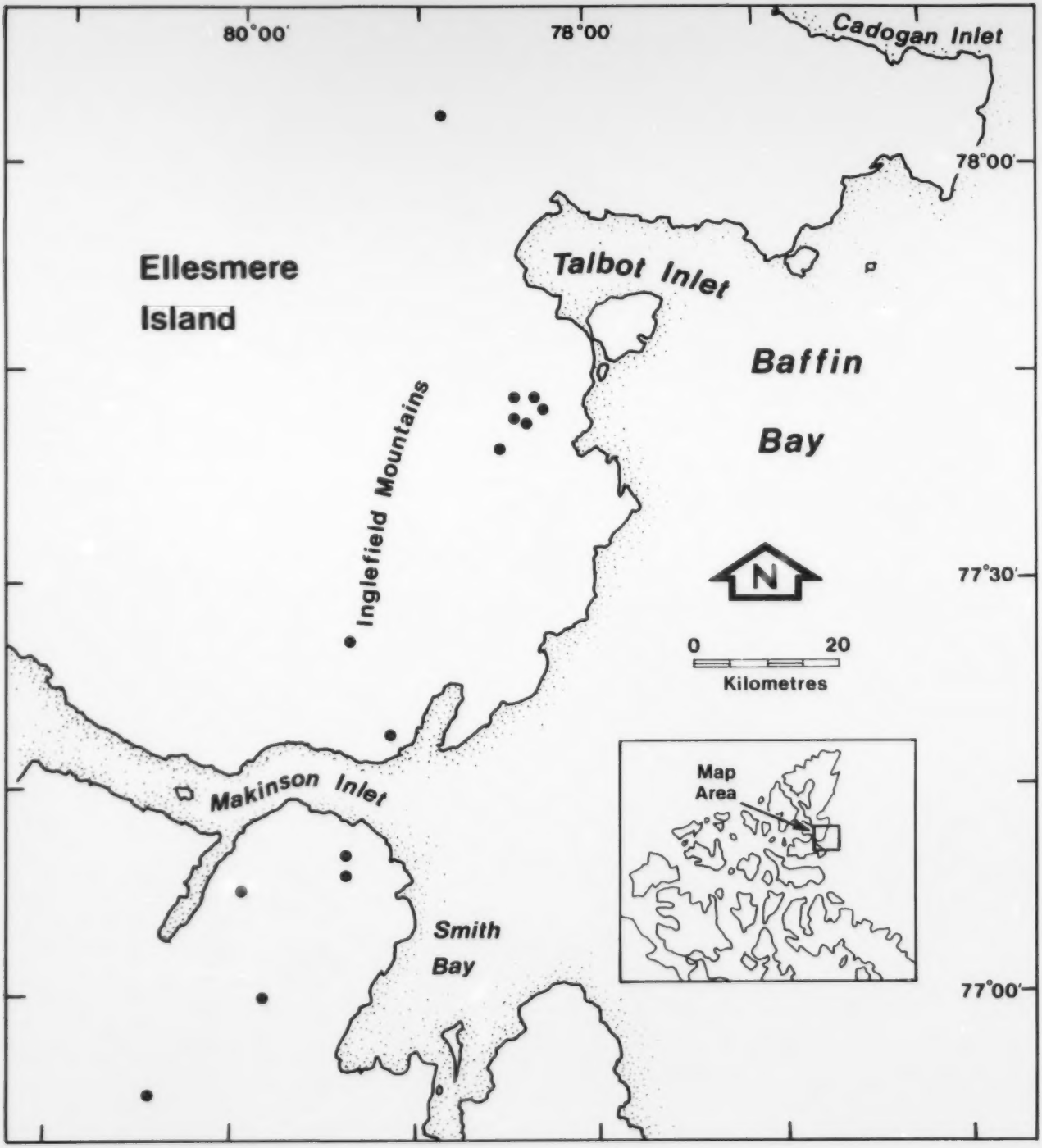
References

MacDonald, S.D. 1976. Phantoms of the polar pack ice. Audubon 78(3):2–19.

MacDonald, S.D. 1978. Status report on the Ivory Gull *Pagophila eburnea* in Canada, 1978. Unpubl. rep., Comm. Status Endangered Wildl. Can., Ottawa. 16 pp.

Thomas, V.G.; MacDonald, S.D. 1987. The breeding distribution and current population status of the Ivory Gull in Canada. Arctic 40(3):211–218.

Site 18: Inglefield Mountains



Site 18: Inglefield Mountains

Location: 77°20′N, 79°15′W **Size: 14 km²**

Description

The Inglefield Mountains are located north and south of Makinson Inlet on southeastern Ellesmere Island. Much of the area is covered by upland ice fields and has a maximum elevation of 1500 m. Nunataks are found among the ice fields, and rock cliffs border the coastal areas. In general, the area is underlain by metamorphic and granitic rocks of the Canadian Shield (Frisch and Morgan 1979).

The community of Grise Fiord is located on the south coast of Ellesmere Island, about 130 km from this site.

Biological value

The nunataks of this area support 30–35% of the national Ivory Gull breeding population. In the early 1980s, between 730 and 830 adults were distributed among 14 colonies (locations given on the map on the facing page are only approximate), which ranged in size from 12 to 300 birds (Thomas and MacDonald 1987). The number of breeding pairs likely fluctuates between years. All colonies are located inland among the highest reaches of the nunataks and are usually associated with granitic gneiss and migmatic, undifferentiated plutonic, and volcanic rocks (Thomas and MacDonald 1987). The authors noted that there were very few signs that other birds or mammals ever visit the colonies.

Prior to 1977, when these colonies were first described by Frisch and Morgan (1979), Seymour Island was the only known major breeding site for Ivory Gulls in the Canadian Arctic. Studies in the early 1980s by Thomas and MacDonald (1987) established the importance of the area as an Ivory Gull breeding site. Based on studies at Seymour Island (MacDonald 1976), Ivory Gulls likely occupy the area from late May to late August.

The Ivory Gull is a rare species in Canada (MacDonald 1978).

Sensitivities

The remoteness of Ivory Gull colonies attests to the intolerance of these birds of disturbance during the breeding season. Aircraft or human interferences could seriously jeopardize their breeding success. Pollution in the polynyas around southeastern Ellesmere Island, where the birds likely feed, could have serious negative impacts.

Potential conflicts

Hydrocarbon exploration has been proposed for western Baffin Bay (Anon. 1982). If conducted, exploratory drilling could subject feeding areas used by the Ivory Gulls to disturbance and pollution.

Status of Key Habitat Site

No special status.

References

Anonymous. 1982. The Lancaster Sound region: 1980–2000. Green Paper, Dep. Indian Affairs North. Dev., Ottawa. 102 pp.

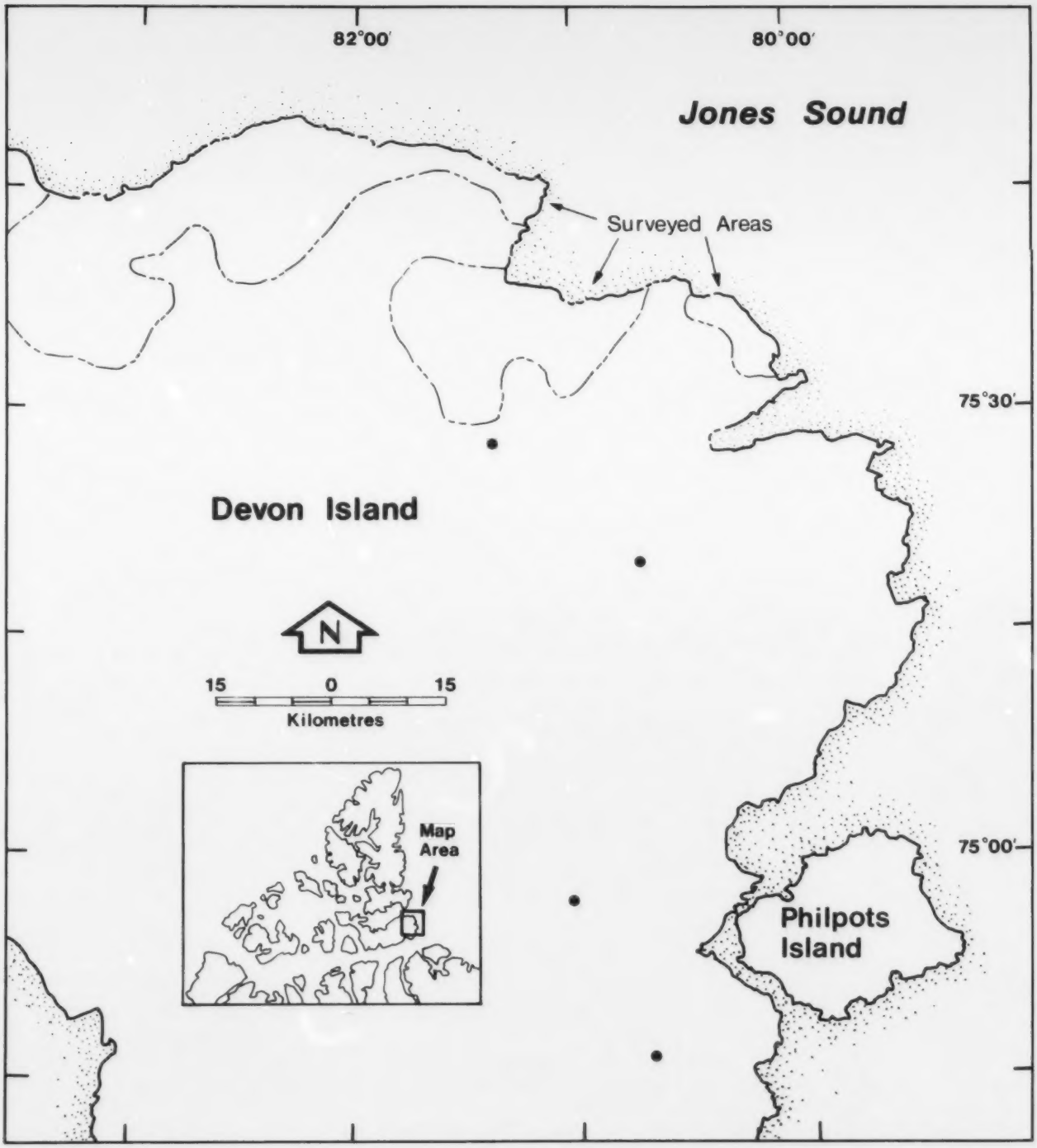
Frisch, T.; Morgan, W.C. 1979. Ivory Gull colonies in southeastern Ellesmere Island, Arctic Canada. Can. Field-Nat. 93(2):173–174.

MacDonald, S.D. 1976. Phantoms of the polar pack ice. Audubon 78(3):2–19.

MacDonald, S.D. 1978. Status report on the Ivory Gull *Pagophila eburnea* in Canada, 1978. Unpubl. rep., Comm. Status Endangered Wildl. Can., Ottawa. 16 pp.

Thomas, V.G.; MacDonald, S.D. 1987. The breeding distribution and current population status of the Ivory Gull in Canada. Arctic 40(3):211–218.

Witts, N.R.J.; Morrison, R.I.G. 1980. Joint services expedition to Princess Marie Bay, Ellesmere Island, 1980: Preliminary report. Wader Study Group Bull. 30:34–35.


82°00'
80°00'
Jones Sound
Surveyed Areas
75°30'
Devon Island
N
15 0 15
Kilometres
Map Area
75°00'
Philpots Island

Site 19: Eastern Devon Island

Location: 75°5′N, 80°50′W **Size: 4 km²**

Description

Most of the land mass in this area is covered by the Devon ice cap, which reaches a maximum elevation of 2000 m above sea level. Nunataks occur within the ice cap at elevations up to 1500 m. In general, the area is underlain by metamorphic and granitic rocks of the Canadian Shield (Frisch and Morgan 1979; Frisch 1983). On Devon Island, nunataks are concentrated along major glaciers flowing out to the northern coast and in the southeastern corner of the ice cap (Frisch 1983).

Grise Fiord, the nearest community, is located on southern Ellesmere Island about 140 km northwest of this site.

Biological value

Four colonies of Ivory Gulls occur within this area, three of which each comprise 1% of the known national breeding population. In 1982, the estimated numbers at each colony from north to south were 25 (75°28′N, 81°22′W), 30 (75°20′30″N, 80°43′W), 30 (75°57′N, 81°02′30″W), and 6 (74°46′30″N, 80°42′W) (Frisch 1983). Breeding has not been confirmed at these colonies, and the sizes need to be better documented. A region of similar habitat along the north coast of Devon Island was surveyed intensively (outlined area on map), but no colony was found (Thomas and MacDonald 1987).

Based on studies at Seymour Island (MacDonald 1976), Ivory Gulls likely occupy the area from late May to late August.

The Ivory Gull is a rare bird in Canada (MacDonald 1978).

Sensitivities

The remoteness of Ivory Gull colonies attests to the intolerance of these birds of disturbance during the breeding season. Aircraft or human interferences could seriously jeopardize their breeding success. Pollution in the polynyas around northeastern Devon Island, where the birds likely feed, could have serious negative impacts.

Potential conflicts

Hydrocarbon exploration has been proposed for western Baffin Bay (Anon. 1982). If conducted, exploratory drilling could subject feeding areas used by the Ivory Gulls to disturbance and pollution.

Status of Key Habitat Site

No special status.

References

Anonymous. 1982. The Lancaster Sound region: 1980–2000. Green Paper, Dep. Indian Affairs North. Dev., Ottawa. 102 pp.

Frisch, T. 1983. Ivory Gull colonies on the Devon Island ice cap, Arctic Canada. Arctic 36(4):370–371.

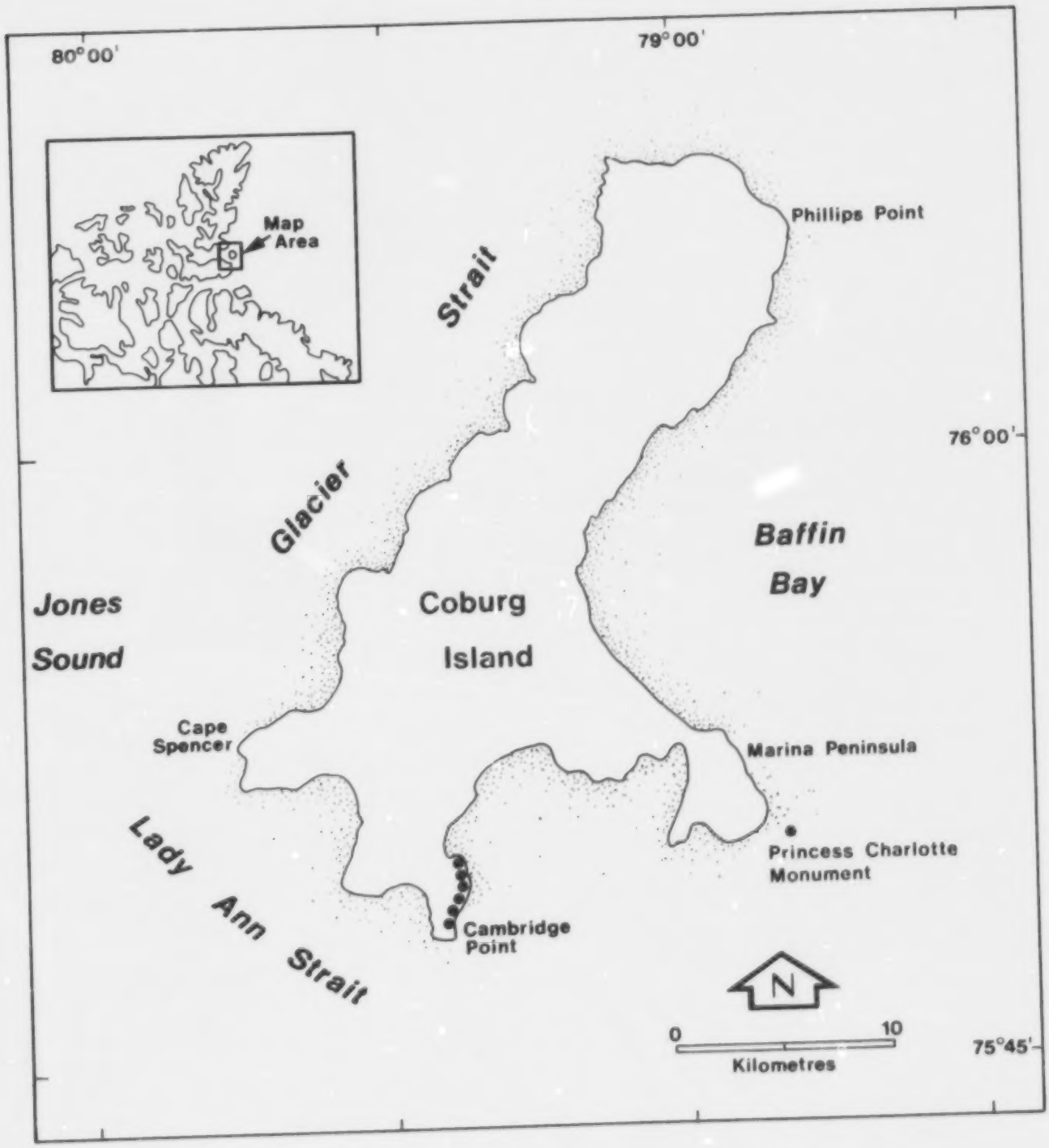
Frisch, T.; Morgan, W.C. 1979. Ivory Gull colonies in southeastern Ellesmere Island, Arctic Canada. Can. Field-Nat. 93(2):173–174.

MacDonald, S.D. 1976. Phantoms of the polar pack ice. Audubon 78(3):2–19.

MacDonald, S.D. 1978. Status report on the Ivory Gull *Pagophila eburnea* in Canada, 1978. Unpubl. rep., Comm. Status Endangered Wildl. Can., Ottawa. 16 pp.

Thomas, V.G.; MacDonald, S.D. 1987. The breeding distribution and current population status of the Ivory Gull in Canada. Arctic 40(3):211–218.

Site 20: Coburg Island



Site 20: Coburg Island

Location: 75°50′N, 79°25′W **Size: 6 km²**

Description

Coburg Island is situated in eastern Jones Sound, midway between Devon and Ellesmere islands. It is characterized by very rugged terrain of Precambrian granitic gneiss (Douglas and MacLean 1963), with an ice cap pierced by peaks rising over 800 m above sea level. The coastline is heavily glaciated, and there are many prominent cliffs, especially towards the south end.

There are 150- to 300-m cliffs near Cambridge Point at the southern tip of the island. Princess Charlotte Monument, a cone-shaped islet with precipitous cliffs, is located 1 km off southeast Coburg Island.

An area of open water persists in the vicinity of Coburg Island during the winter, then joins the North Water polynya in late spring (Stirling and Cleator 1981).

An archaeological site occurs north of Cape Spencer on the southwest coast.

Biological value

Approximately 30 000 pairs of Black-legged Kittiwakes, representing 16% of the Canadian population and almost one-third of the Northwest Territories population, nest along 6 km of cliffs at Cambridge Point. This is the largest colony of this species in the Northwest Territories (Nettleship 1980).

These cliffs also support 11% (160 000 pairs) of the Thick-billed Murres in Canada. This is the third largest colony of this species in the Northwest Territories (Nettleship 1980).

Approximately 3000 pairs of Northern Fulmars breed on Princess Charlotte Monument. Black Guillemots and Glaucous Gulls also nest in the area (Nettleship 1980). Bays at the south end of Coburg Island are an important stopover area for large numbers of King Eiders migrating from Greenland to eastern Lancaster Sound in May and early June (McLaren and McLaren 1982). Smaller numbers of Oldsquaw are also present.

The seabirds arrive at their breeding grounds in late April, feeding in open leads and polynyas. The young and adults leave the colony by early October.

White whales, narwhals, and bowhead whales feed in the North Water polynya; ringed, bearded, and harp seals are abundant in the area (Stirling and Cleator 1981). Walruses occur in the polynya and haul out in the southern bays of Coburg Island. Polar bears hunt along the floe edges and concentrate in the vicinity of Coburg Island (Kiliaan et al. 1978).

Sensitivities

Seabirds are sensitive to disturbance at their breeding cliffs and to pollution of their foraging areas.

Potential conflicts

Hydrocarbon exploration has been proposed for western Baffin Bay (Anon. 1982). If conducted, exploratory drilling could subject feeding areas to disturbance and pollution.

Status of Key Habitat Site

IBP Site.

References

Anonymous. 1982. The Lancaster Sound region: 1980–2000. Green Paper, Dep. Indian Affairs North. Dev., Ottawa. 102 pp.

Douglas, R.J.W.; MacLean, B. 1963. Geology — Yukon Territory and Northwest Territories. Map 30, Geol. Surv. Can., Ottawa.

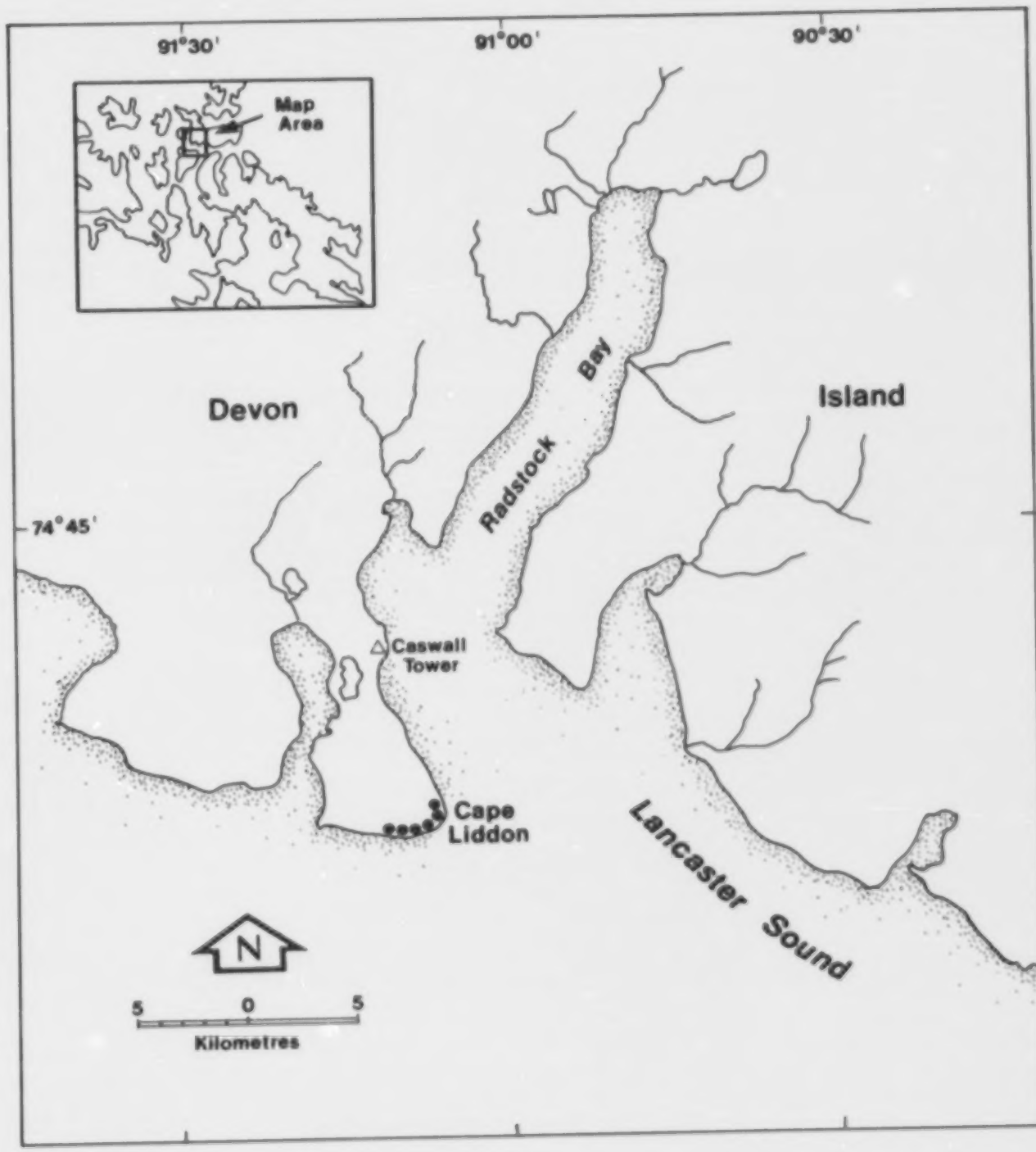
Kiliaan, H.P.L.; Stirling, I.; Jonkel, C.J. 1978. Polar Bears in the area of Jones Sound and Norwegian Bay. Prog. Note No. 88, Can. Wildl. Serv., Edmonton. 21 pp.

McLaren, P.L.; McLaren, M.A. 1982. Waterfowl populations in eastern Lancaster Sound and western Baffin Bay. Arctic 35(1):149–157.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.

Stirling, I.; Cleator, H. (eds.). 1981. Polynyas in the Canadian Arctic. Occas. Pap. No. 45, Can. Wildl. Serv., Ottawa. 70 pp.

Site 21: Cape Liddon



Site 21: Cape Liddon

Location: 74°37'N, 91°10'W **Size: 3.5 km²**

Description

Cape Liddon is a promontory that juts into Barrow Strait on the west side of Radstock Bay, southwest Devon Island. This part of the plateau on Devon Island is characterized by precipitous limestone cliffs that rise over 300 m above sea level. Caswall Tower is a high rock stack overlooking Radstock Bay approximately 9 km north of Cape Liddon.

Archaeological sites, including three Inuit houses and 10 to 15 tent rings, are in the area south of Caswall Tower (Nettleship and Smith 1975).

Biological value

A colony of an estimated 10 000 pairs of Northern Fulmars, representing about 3% of the Canadian population, occupies 3.5 km of cliff ledges at Cape Liddon (Nettleship 1974, 1980). However, the estimate is provisional, and the actual number ranges between 1000 and 10 000 pairs (0.3–3% of the national population), although tending towards the higher value. Up to 100 pairs of Black Guillemots nest around Caswall Tower (Nettleship 1980). The fulmars arrive in mid-April, and the adults and young leave the breeding cliffs by early October. The highly productive waters of Lancaster Sound and Barrow Strait provide important feeding areas for these seabirds (Nettleship and Gaston 1978).

Large numbers of white whales, narwhals, ringed seals, and harp seals migrate through Lancaster Sound. Polar bears use the indented southern coast of Devon Island for maternity denning and as a summer retreat. Radstock Bay is an important summer retreat for polar bears (Schweinsburg et al. 1982).

Sensitivities

Breeding seabirds are sensitive to disturbance and pollution of their marine feeding areas.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

IBP Site.

References

Anonymous. 1982. The Lancaster Sound region: 1980–2000. Green Paper. Dep. Indian Affairs North. Dev., Ottawa. 102 pp.

Milne, A.R.; Smiley, B.D. 1978. Offshore drilling in Lancaster Sound: possible environmental hazards. Unpubl. rep., Dep. Fish. Environ., Sidney. 95 pp.

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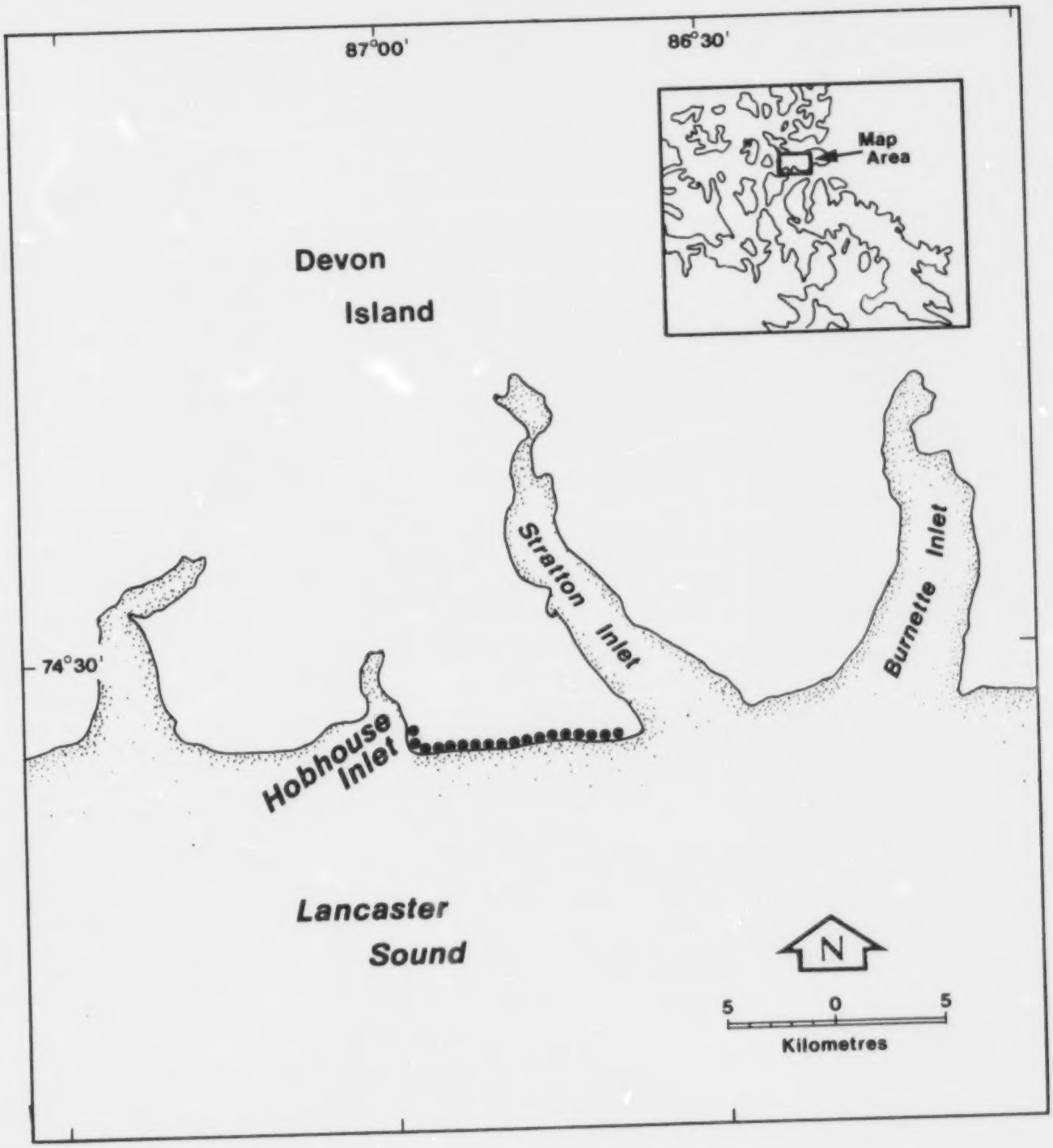
Nettleship, D.N.; Gaston, A.J. 1978. Patterns of pelagic distribution of seabirds in western Lancaster Sound and Barrow Strait, Northwest Territories, in August and September 1976. Occas. Pap. No. 39, Can. Wildl. Serv., Ottawa. 40 pp.

Nettleship, D.N.; Smith, P.A. (eds.). 1975. Ecological sites in northern Canada. Can. Comm. Int. Biol. Program, Conserv. Terr., Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Schweinsburg, R.E.; Lee, L.J.; Latour, P. 1982. Distribution, movement, and abundance of polar bears in Lancaster Sound, Northwest Territories. Arctic 35(1):159–169.


87°00'
86°30'
Map Area
Devon Island
Stratton Inlet
Burnette Inlet
74°30'
Hobhouse Inlet
Lancaster Sound
N
5 0 5
Kilometres

Site 22: Hobhouse Inlet

Location: 74°28′N, 86°50′W **Size: 10 km²**

Description

Hobhouse Inlet is located along the indented southern coast of Devon Island, 60 km east of Maxwell Bay. Sedimentary cliffs, over 460 m in height, extend along the coast between Hobhouse Inlet and Stratton Inlet. The central part of this promontory is covered by a permanent ice cap.

Biological value

The coast east of Hobhouse Inlet is the breeding site of an estimated 75 000 pairs of Northern Fulmars (Nettleship 1974, 1980), which represents about 20% of the Canadian population. However, the estimate is provisional, and the actual number likely lies between 10 000 and 100 000 pairs (3–27%), although tending towards the higher value. The fulmars occupy grassy rock ledges along 10 km of cliff face from mid-April to early October. The highly productive waters of Lancaster Sound and Barrow Strait provide important feeding areas for these seabirds (Nettleship and Gaston 1978).

Lancaster Sound is also important to marine mammals. Large numbers of white whales, narwhals, ringed seals, and harp seals use the sound as a migration route. Polar bears are common in the area throughout the year and use the entire south coast of Devon Island for maternity denning and as a summer retreat (Schweinsburg et al. 1982).

Sensitivities

Fulmars are sensitive to disturbance at their colony site and to pollution of their marine foraging areas.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

IBP Site.

References

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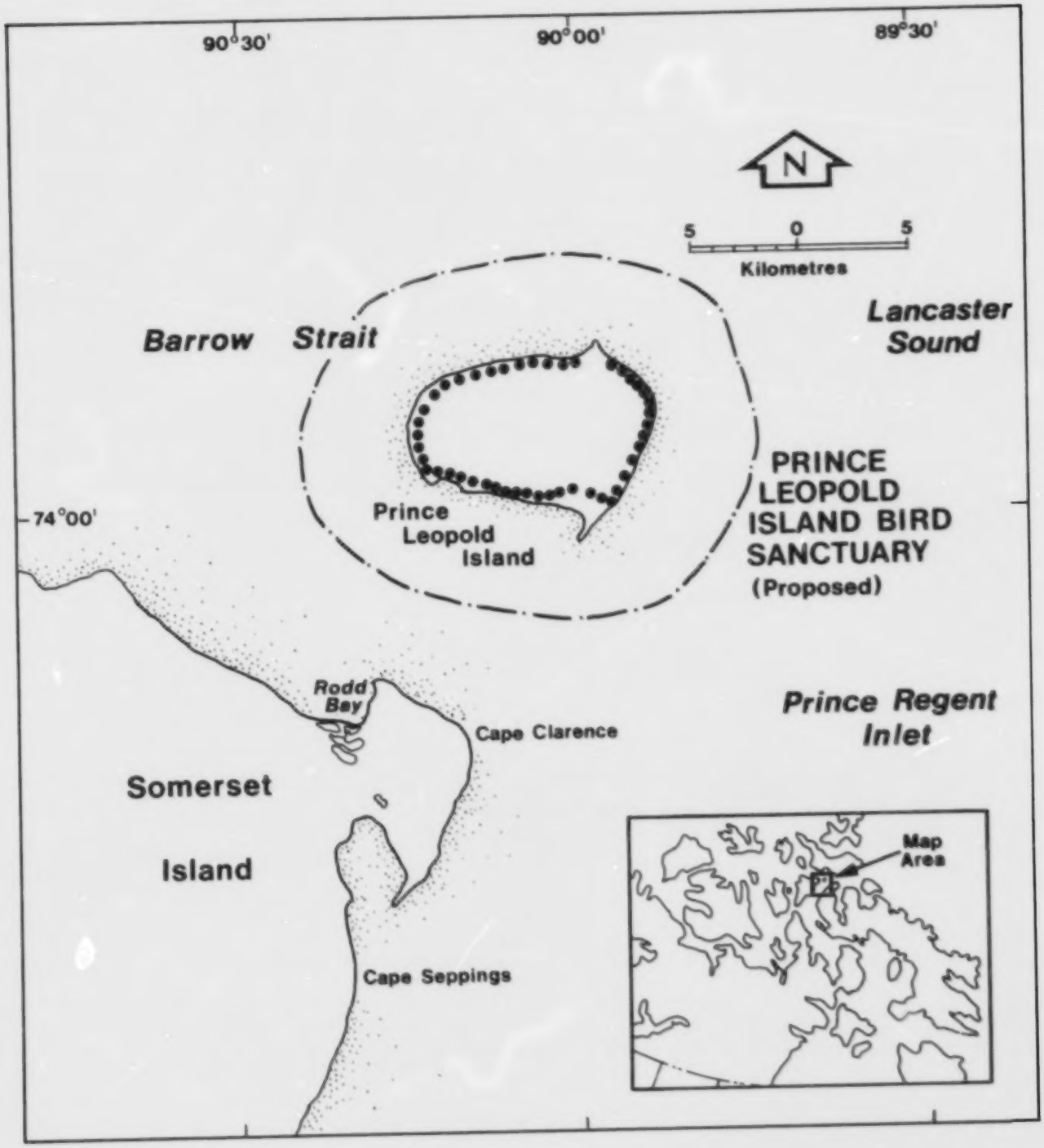
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Kilometres
Barrow Strait
Lancaster Sound
PRINCE LEOPOLD ISLAND BIRD SANCTUARY
(Proposed)
Prince Leopold Island
74°00'
Rodd Bay
Cape Clarence
Prince Regent Inlet
Somerset Island
Cape Seppings
Map Area

Site 23: Prince Leopold Island

Location: 70°02′N, 90°00′W **Size: 32 km²**

Description

Prince Leopold Island is situated in western Lancaster Sound at the junction of Prince Regent Inlet and Barrow Strait. The island lies approximately 13 km north of Cape Clarence, Somerset Island.

The island is bounded on all sides by vertical cliffs of Silurian sandstone and limestone, ranging from 245 to 265 m in height. The bases of the north and south cliffs are covered by scree slopes. Gravel spits extend approximately 1 km outward from the base of the northeast and southeast corners of the island. The Paleozoic rock tends to fracture into flat slabs, resulting in numerous small ledges upon which seabirds nest (Gaston and Nettleship 1981). Access from the beach to the top of the island is possible at only a few places where the plateau is broken by stream-cut gullies.

The sparse vegetation is characterized by mosses, lichens, grasses, and a few dwarf shrubs (Woo and Zoltai 1977).

Several Inuit archaeological sites are located on the east side of the south gravel spit of the island.

Biological value

Prince Leopold Island supports a major seabird community that includes 62 000 pairs of Northern Fulmars, 29 000 pairs of Black-legged Kittiwakes, 86 000 pairs of Thick-billed Murres, and 4000 pairs of Black Guillemots (Gaston and Nettleship 1981). These numbers represent approximately 17%, 16%, 6%, and 5% of the national populations of these species, respectively.

The site is occupied by the seabirds generally from early May to the end of September. The Thick-billed Murres nest on the east and northeast cliffs, whereas Northern Fulmars are located on all cliffs except a section of the north side. Black-legged Kittiwakes are most numerous on the north cliff. Black Guillemots nest on the west side of the island among scree rock crevices. In addition, 200 pairs of Glaucous Gulls are dispersed along the west, south, and east cliffs, and Thayer's Gulls and Ivory Gulls are seen irregularly throughout the summer (Nettleship 1976).

Although weasels and lemmings are the only resident land mammals, the island may be visited infrequently by Peary caribou and Arctic fox during the winter and spring breakup period. The waters about the island attract marine mammals, including white whales, narwhals, walruses, polar bears, ringed seals, and bearded seals.

Sensitivities

Seabirds are sensitive to disturbance and the pollution of offshore waters.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

Prince Leopold Island is scheduled for designation as a Migratory Bird Sanctuary in 1991; IBP Site.

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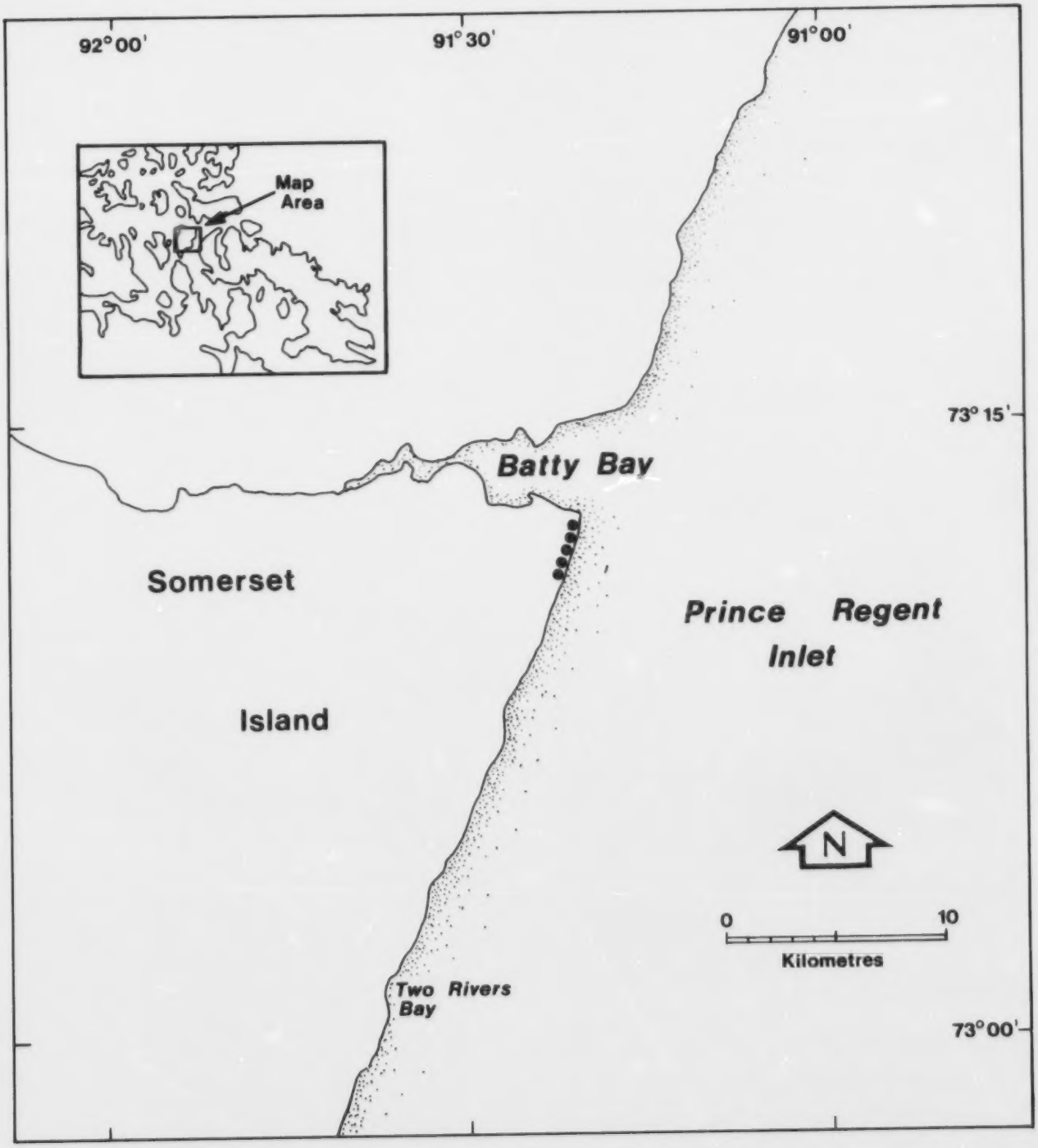
Woo, V.; Zoltai, S.C. 1977. Reconnaissance of soils and vegetation of Somerset and Prince of Wales islands, NWT. Can. For. Serv., Fish. Environ. Can., Edmonton. 127 pp.

Site 24: Batty Bay



Site 24: Batty Bay

Location: 73°14′N, 91°25′W **Size: 1 km²**

Description

Batty Bay, located on the eastern coast of Somerset Island, is composed of an inner and outer bay, separated by shallows. The eastern end of Batty Bay is 5 km wide and empties into Prince Regent Inlet. The shores of Batty Bay are primarily Silurian limestone cliffs, up to 305 m in height, with extensive scree slopes. Near the mouth of the bay, there are tidal flats of sand or mud on the north and south coasts.

The ice-free conditions in this area are exceptional, with open water extending from Lancaster Sound into Prince Regent Inlet along Somerset Island's east coast. Cracks and shoreleads may develop in the ice along this coast early in January (Stirling and Cleator 1981).

Several archaeological sites are located on the northern shore of the bay.

Biological value

In 1975, 2000 pairs of Black-legged Kittiwakes were present at this site, which represents about 1% of the Canadian population. However, in 1974, only 350 pairs were present. The differences were likely due to the availability of open water in Prince Regent Inlet, which was much greater in June 1975 than in June 1974 (Alliston et al. 1976:299). Further surveys are required to establish the consistency of use of this site. These cliffs are occupied from May to September.

If spring ice conditions permit, migrating King and Common eiders may stage along the east coast of Somerset Island (McLaren and Alliston 1985).

Spring shoreleads in Prince Regent Inlet also provide an important corridor for migrating sea mammals. Approximately 100 white whales have been observed in Batty Bay during July and August, migrating south from Lancaster Sound into Creswell Bay and the more southerly reaches of Prince Regent Inlet (Sergeant and Hay 1979). The site is also utilized by small numbers of walrus in the summer and Arctic fox and polar bear in the winter.

Sensitivities

Seabirds are sensitive to disturbance and pollution of their marine foraging areas.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

No special status.

References

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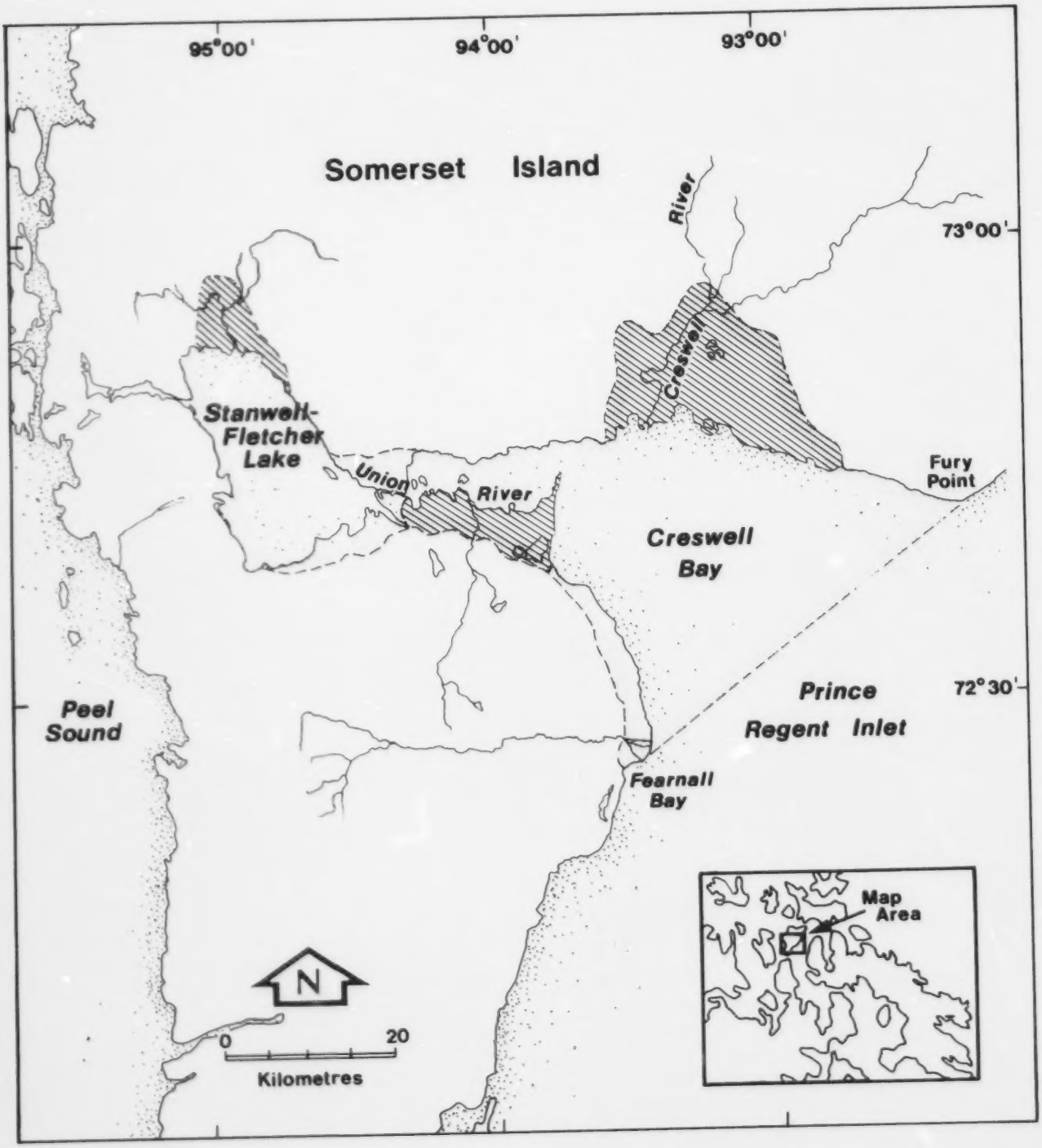
Site 25: Creswell Bay



Site 25: Creswell Bay

Location: 72°45′N, 93°40′W **Size: 2178 km²**

Description

Creswell Bay opens into Prince Regent Inlet midway along the east side of Somerset Island. A barren limestone plateau comprises much of Somerset Island. Lowlands extend around the bay and Stanwell-Fletcher Lake. Extensive tidal flats occur on the bay's north shore. The south shore is low limestone hills and ridges. The Union River drains Stanwell-Fletcher Lake through a low, rocky area. The lake's western shore is bounded by cliffs. There are well-vegetated thermokarst areas along the Creswell River and north of the lake.

A lead develops offshore along the entire eastern coast of Somerset Island in January and in spring, whereas a transverse lead occurs across Prince Regent Inlet south of Creswell Bay (Stirling and Cleator 1981).

Relics of two Dorset settlements and five Thule sites have been found in the Creswell Bay area.

Biological value

Nearly 20 000 birds, mostly shorebirds, nested in this area in 1975. The thermokarst area along the Creswell River is the largest and most important area for nesting birds. In 1974, 2700 Greater Snow Geese (1% of the Canadian population) moulted in the area. Few Snow Geese nested that year, but 250 pairs nested and 1000 adults moulted there in 1975 (Alliston et al. 1976). In 1977, nearly 1800 adult geese and 25 young were noted (Patterson and Alliston 1978). The geese arrive in the area in early June and depart by the end of August.

In 1975, the shorebird nesting population was estimated at nearly 15 400 birds. The most abundant species were the White-rumped Sandpiper (5750 birds), Red Phalarope (3550), Black-bellied Plover (1890), and Sanderling (1820). Lesser Golden-Plovers, Ruddy Turnstones, and Baird's Sandpipers were also common. Estimates of continental shorebird populations are not available. In later summer, staging and local shorebirds feed in large numbers in the mud flats along the north shore of Creswell Bay. On 21 August 1975, more than 12 000 shorebirds were in this area. There is no measure of turnover, so the total number of birds may be considerably higher. The primary prey are pelagic amphipods, washed into shallow water from offshore areas of Creswell Bay (Alliston et al. 1976).

King Eiders nest in the area (50 to 90 pairs in 1975). More than 7000 eiders staged along the coast in 1975. The thermokarst area was used by 450 to 700 pairs of nesting Oldsquaws; later in the summer, over 4800 birds moulted in Creswell Bay. Northern Fulmars and Black-legged Kittiwakes forage in Creswell Bay. Peregrine Falcons have also been seen in the area (Alliston et al. 1976).

White whales calve in Creswell Bay, and small numbers of narwhals and bowhead whales are present during the summer. Creswell Bay is a summer retreat and a possible denning area for polar bears (Stirling et al. 1979).

The Stanwell-Fletcher basin is a wintering area for caribou and a small herd of muskoxen (Russell et al. 1979).

Sensitivities

The thermokarst lowlands are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Nesting and moulting birds are sensitive to disturbance. Shorebirds, sea ducks, and seabirds are sensitive to pollution in Creswell Bay.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Although Prince Regent Inlet south to approximately Batty Bay has low to moderate potential for oil and gas exploration and development, drilling activities and an increase in air or marine traffic could subject feeding and nesting areas to disturbance and pollution. Mineral exploration has occurred in this area.

Status of Key Habitat Site

IBP Site.

References

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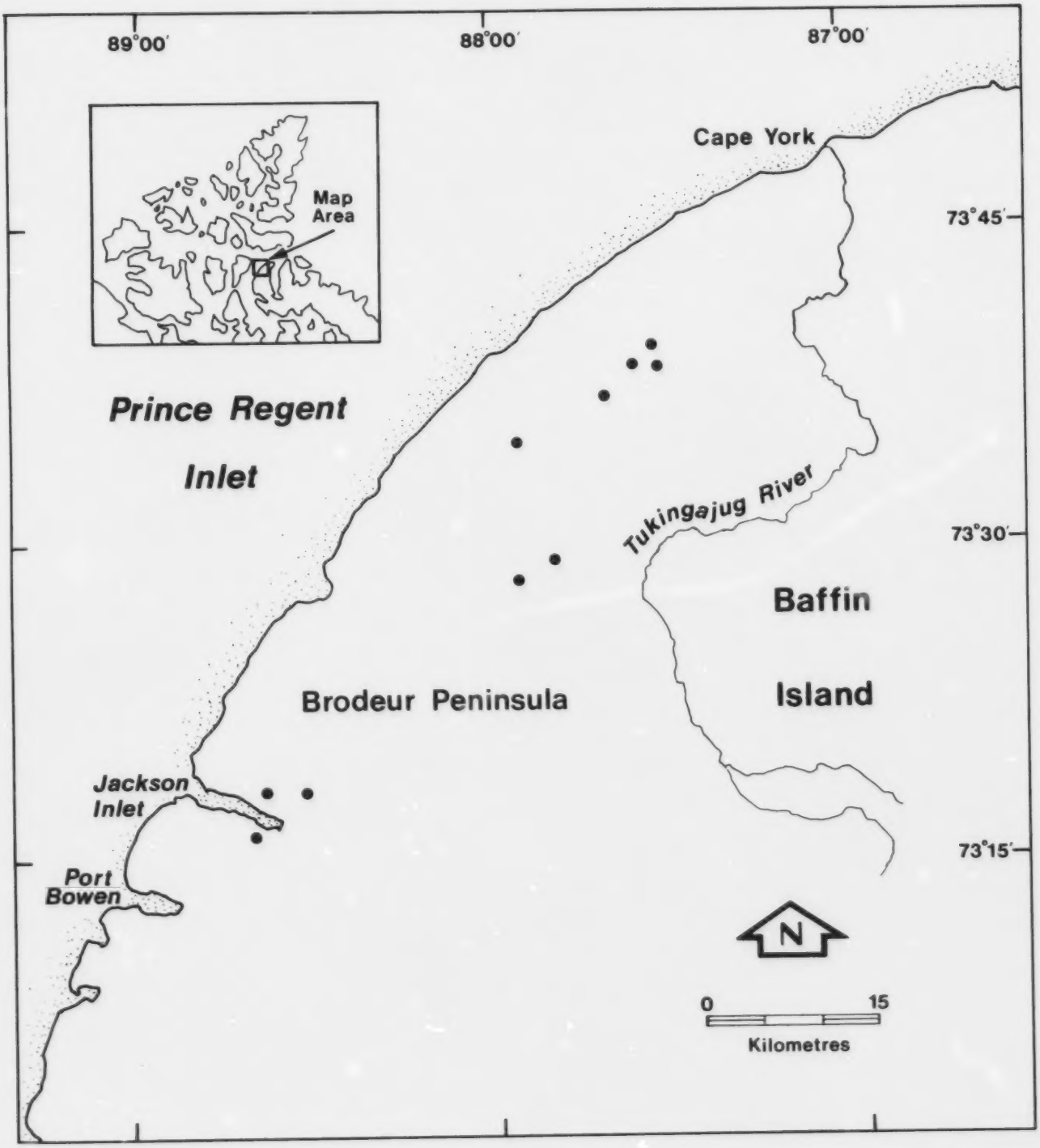
Site 26: Northwestern Brodeur Peninsula



Site 26: Northwestern Brodeur Peninsula

Location: 73°37′N, 87°45′W **Size: 10 km²**

Description

This site consists of 10 separate plateaus on northwestern Brodeur Peninsula. In general, the peninsula is an area of limestone-rubble plateaus, extensively intersected by ravines (Thomas and MacDonald 1987). Most of the area is polar desert.

Arctic Bay, the nearest community, is about 150 km northeast of the centre of this site.

Biological value

This area provides habitat for 23–24% of the national Ivory Gull breeding population. In the early 1980s, between 560 and 580 adults were distributed among 10 colonies (locations given on the map on the facing page are only approximate), which ranged in size from 12 to 180 birds. The number of breeding pairs likely fluctuates between years. All colonies were located on limestone plateaus. "Plaques of highly eroded limestone constitute the colony substrate, and nests were built on this using imported vegetation" (Thomas and MacDonald 1987).

Based on studies at Seymour Island (MacDonald 1976), Ivory Gulls likely occupy the area from late May to late August.

The Ivory Gull is a rare bird in Canada (MacDonald 1978).

Sensitivities

The remoteness of Ivory Gull colonies attests to the intolerance of these birds of disturbance during the breeding season. Aircraft or human interferences could seriously jeopardize their breeding success.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of marine birds and pollute their feeding areas.

Status of Key Habitat Site

No special status.

References

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MacDonald, S.D. 1976. Phantoms of the polar pack ice. Audubon 78(3):2–19.

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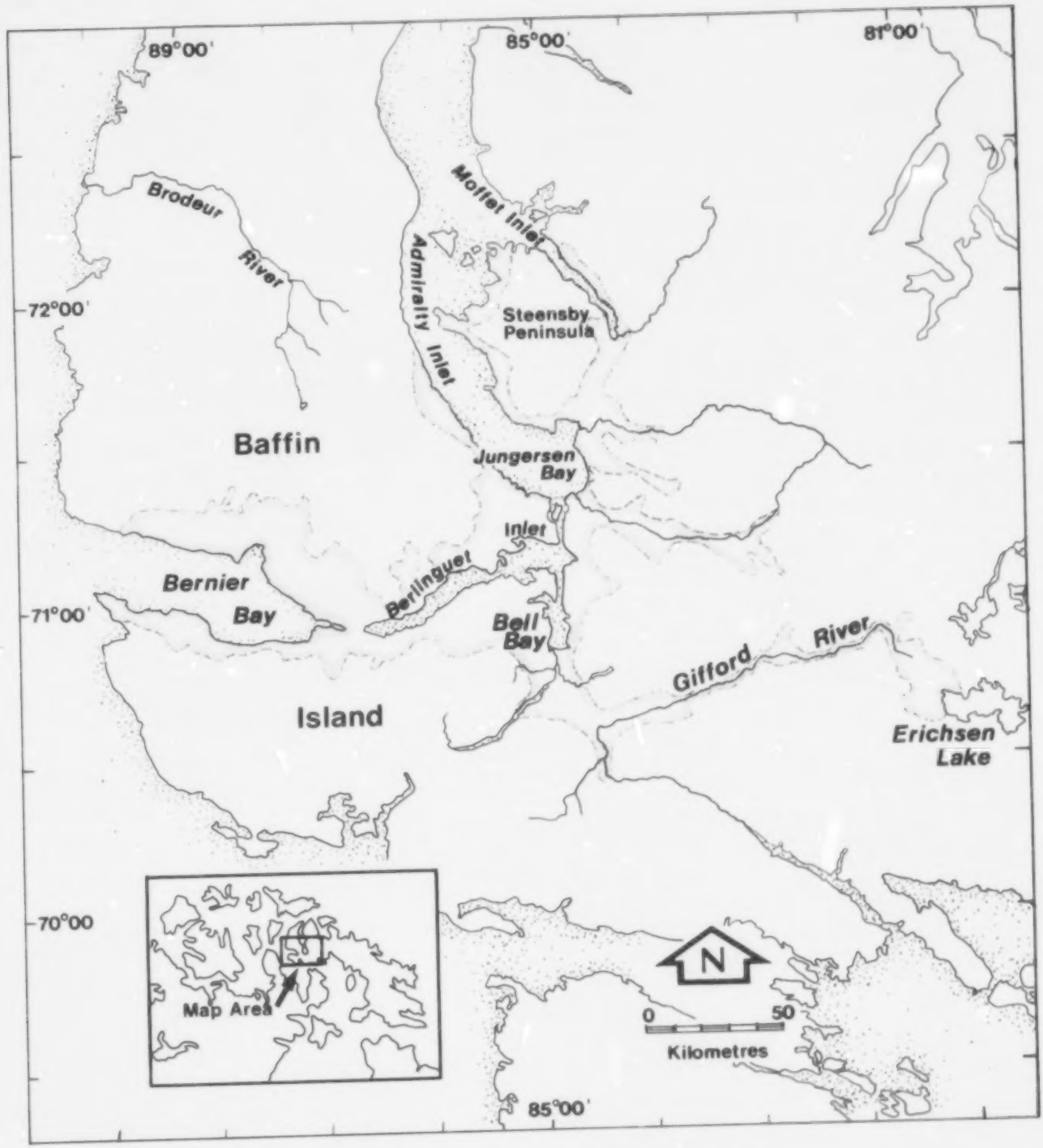
Site 27: Berlinguet Inlet



Site 27: Berlinguet Inlet

Location: 71°15′N, 85°50′W **Size: 11 141 km²**

Description

This site encompasses the coastal zone and surrounding lowlands of Bernier Bay, Berlinguet Inlet, and southern Admiralty Inlet on northwestern Baffin Island.

The shores of the bays and inlets are generally low, but hills rising to elevations of 150–300 m occur near the coast in some areas. Numerous small lakes are found in the coastal areas south of Admiralty Inlet and in the Moffet Inlet region.

The area is predominantly a gently rolling, coastal plain of very low relief. Lowland vegetation complexes of sedge–grass and tundra polygons occur in the river valleys.

Biological value

After Bylot Island, this area, including Jungersen Bay, is the second most important breeding area for Greater Snow Geese (A. Reed, pers. commun., in Giroux et al. 1984). Heyland and Boyd (1970) stated that a major portion of the Canadian breeding population utilizes the area. A partial survey of the site in July 1969 revealed 6700 Greater Snow Geese. In July 1979, Reed et al. (1980) recorded more than 2000 Snow Geese in one section of the site. A more complete survey in August 1980 disclosed 14 700 birds, which is 7% of the North American population (Reed and Dupuis 1980).

Broods of Canada Geese, which represent the most northeasterly breeding records of this species, were observed in 1980 (Reed and Dupuis 1980) and 1983 (A. Reed, pers. commun.).

Terns, gulls, fulmars, sea ducks, and Peregrine Falcons nest and feed within the area (Kemper 1976; Reed and Dupuis 1980).

The waters of the area are used by ringed seal, bearded seal, and polar bear. The islands of Admiralty Inlet are important as a summer retreat for polar bears (Kemper 1976).

Sensitivities

Snow Geese and other birds are sensitive to disturbance. The low-lying areas are susceptible to terrain disturbance, and marine waters are susceptible to pollution.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

No special status.

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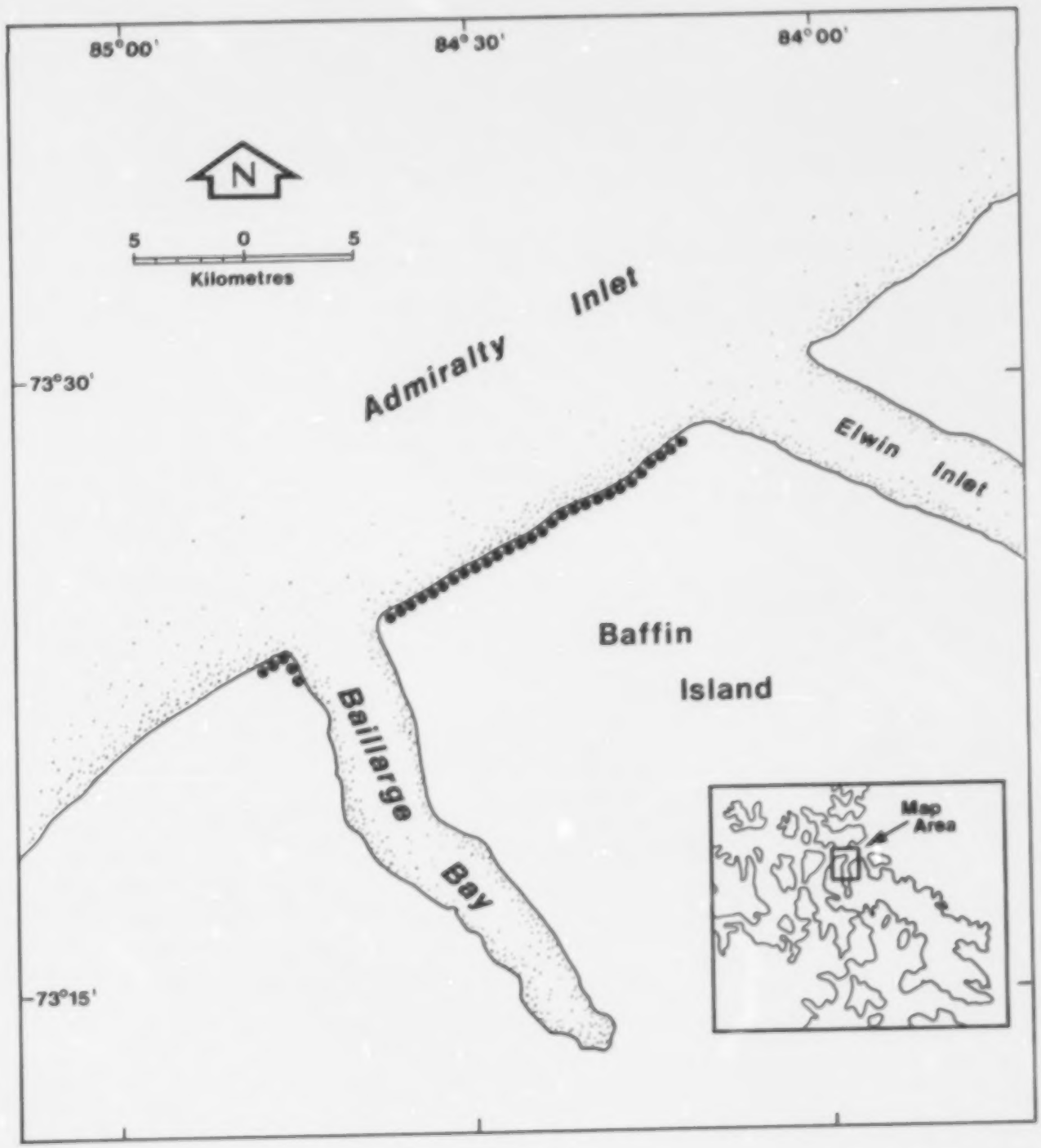
Site 28: Baillarge Bay



Site 28: Baillarge Bay

Location: 73°25'N, 84°30'W **Size:** 16 km²

Description

Baillarge Bay is situated at the northeastern tip of Admiralty Inlet on north Baffin Island. The site is located approximately 40 km north of the settlement of Arctic Bay.

Steep, rugged cliffs up to 610 m high occur along the coast of Admiralty Inlet between Baillarge Bay and Elwin Inlet. The cliffs, which are composed chiefly of Ordovician sandstone, limestone, and dolomite, are part of a dissected plateau that covers much of northwestern Baffin Island (Lemon and Blackadar 1963).

Biological value

A major Northern Fulmar colony of about 25 000 breeding pairs extends continuously from Baillarge Bay northeast to Elwin Inlet, a linear distance of slightly more than 16 km (Nettleship 1980). This colony represents approximately 7% of the Canadian population of this species. However, the estimate is provisional, based on a 1972 survey, and actual numbers probably lie in the range of 10 000 to 100 000 pairs (Nettleship 1980). More detailed and recent data are required.

The fulmars nest on bare or grassy rock ledges and in crevices in the cliff face from about 100 m above the sea up to the top of the cliffs. The highest density of breeding birds is found from the northeast tip of Baillarge Bay east to the midpoint of the promontory. The birds appear in late April and leave the area by late September or early October (Nettleship 1980).

The high productivity of Lancaster Sound also attracts marine mammals, such as white whales, ringed seals, and harp seals. Narwhals remain in the deep fiords of Admiralty Inlet during the summer (Sergeant and Hay 1979). Polar bears use the area as a summer retreat, concentrating in deep bays where the ice persists (Stirling et al. 1979).

Sensitivities

The fulmars are sensitive to disturbance and the pollution of marine foraging areas.

Potential conflicts

Since 1976, a mine for lead and zinc has been operating at Nanisivik, 50 km south of the Key Habitat Site. Prior to its construction, there were fears that the discharge of effluents into Admiralty Inlet might harm birds and other marine life. The precautions taken in locating the settling tanks away from the shore seem to have prevented any serious pollution.

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

A proposal to create a military Northern Training Centre at Nanisivik, following closure of the mine, is being considered by the Department of National Defence. Military activities could be a source of disturbance to the nesting seabirds (Environmental Systems Group Delcan Corporation 1989).

Status of Key Habitat Site

IBP Site.

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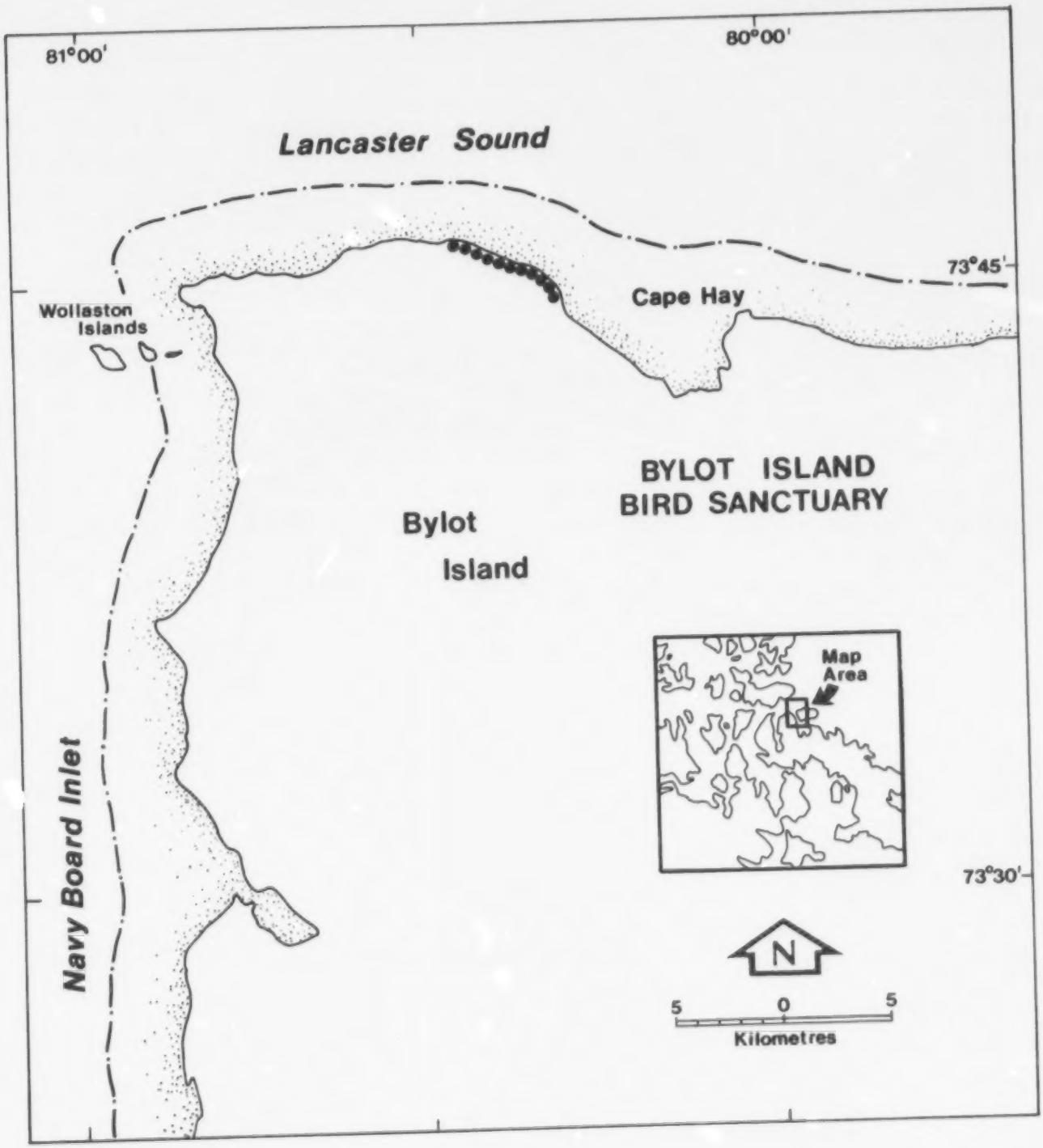
Site 29: Cape Hay



Site 29: Cape Hay

Location: 73°45′N, 80°22′W **Size: 3.5 km²**

Description

Cape Hay is located near the northwestern tip of Bylot Island, which is situated northeast of Baffin Island at the entrance to Lancaster Sound. Most of the island consists of the Precambrian metamorphic rock of the Byam Martin Mountains, which reach a height of 1900 m above sea level. Numerous glaciers radiate from these mountains towards the sea. Vertical cliffs of Precambrian dolomite (Jackson and Davidson 1975) rise 60–460 m above sea level near Cape Hay.

Biological value

Surveys in the mid- to late 1970s indicate that approximately 140 000 pairs of Thick-billed Murres and 20 000 pairs (provisional estimate) of Black-legged Kittiwakes nest at this site (Nettleship 1980). These numbers represent between 10 and 11% of the Canadian populations for both species. This site is the fourth largest Thick-billed Murre colony in the Northwest Territories. There seems to have been a decline in murre numbers since 1957, when there were an estimated 400 000 pairs (Tuck and Lemieux 1959; Tuck 1960:70). There may also have been a decline in kittiwake numbers from 50 000 pairs in 1957 (Tuck and Lemieux 1959). The site is occupied from late May until September.

Lancaster Sound is a major migration route for marine mammals. White whales, narwhals, ringed seals, and harp seals migrate westward past Cape Hay. Polar bears are numerous in the Lancaster Sound area and use the northern coast of Bylot Island for maternity denning and as a summer retreat (Schweinsburg et al. 1982).

Sensitivities

Seabird colonies are sensitive to disturbance and the pollution of offshore waters. Thick-billed Murres are particularly sensitive because they are flightless when they depart from their colonies.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

Cape Hay occurs within Bylot Island Bird Sanctuary and within the area of the proposed national park on Bylot Island and northern Baffin Island; IBP Site.

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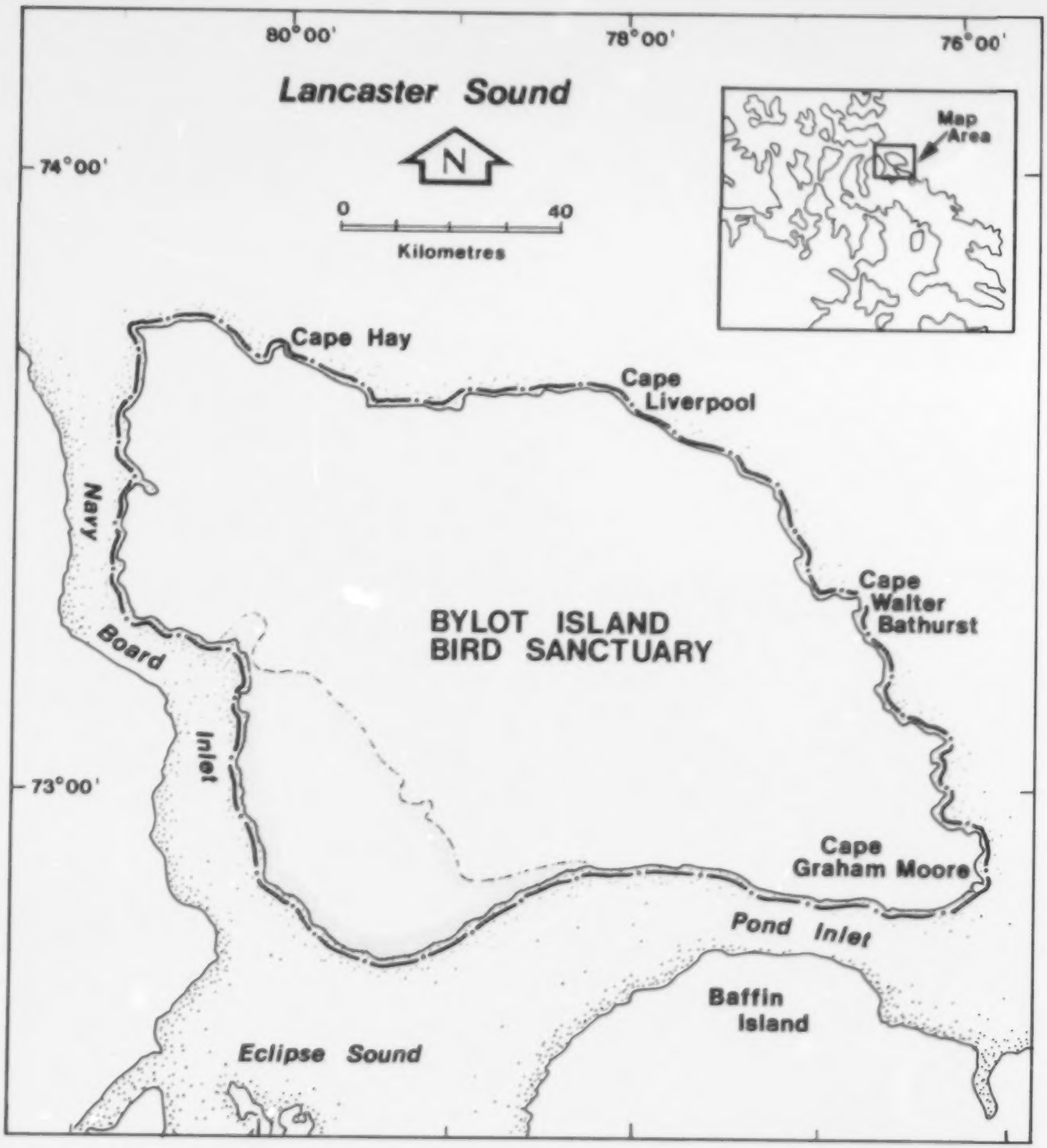
Tuck, L.M.; Lemieux, L. 1959. The avifauna of Bylot Island. Dansk Ornithol. Foren. Tidsskr. 53:137–154.


80°00'
79°00'
76°00'
Lancaster Sound
N
0
40
Kilometres
Map Area
74°00'
Cape Hay
Cape Liverpool
Navy Board Inlet
BYLOT ISLAND BIRD SANCTUARY
Cape Walter Bathurst
73°00'
Cape Graham Moore
Pond Inlet
Baffin Island
Eclipse Sound

Site 30: South Bylot Island

Location: 72°55′N, 79°30′W **Size: 1511 km²**

Description

Bylot Island is situated northeast of Baffin Island at the entrance to Lancaster Sound. Most of the island consists of the Precambrian metamorphic rock of the Byam Martin Mountains, which reach a maximum height of 1900 m above sea level. Numerous glaciers radiate towards the sea from this central mountain chain.

In the southwest corner of the island, a rolling outwash plain cut by glacial rivers rises 60 m above the water and slopes gradually upward to the mountains. Dominant vegetation types are low shrub–herb tundra and shrub–sedge tundra (Zoltai et al. 1983). Heath, willow, and flowering plants are common along ravines and river valleys.

Biological value

This lowland is a major breeding ground for Greater Snow Geese. Nesting colonies of 25 to 300 pairs are scattered throughout the area. The numbers of geese using the site have varied considerably over the years. Fluctuations in numbers are generally correlated with the size of the total population of this subspecies, which has increased in recent years. The low record is 15 000 geese in 1957 (Lemieux 1959); the high record is 37 500 breeding adults, 39 000 goslings, and 7000 nonbreeding adults in 1982 (A. Reed, pers. commun.). Approximately 15 100 breeders, 8200 nonbreeders, and 24 200 goslings were recorded in 1983 (Reed 1983). In 1988, there were approximately 26 700 breeders, 5000 nonbreeders, and 41 400 goslings (A. Reed, pers. commun.). The number of breeders in 1988 represents 13% of the total population of Greater Snow Geese. The birds arrive, already paired, in early June and depart in September, when ice forms on the ponds.

Red-throated Loons, Oldsquaws, King Eiders, and shorebirds also breed in this area, but their populations have not been assessed.

Bylot Island is a major summer retreat for polar bears in the Lancaster Sound area (Schweinsburg et al. 1982).

Sensitivities

Greater Snow Geese are sensitive to disturbance and to pollution of nearshore waters.

Potential conflicts

Increased tourist-related activities could be a source of disturbance (Marshall Macklin Monaghan Ltd. 1982).

Status of Key Habitat Site

This site occurs within Bylot Island Bird Sanctuary and within the area of the proposed national park on Bylot Island and northern Baffin Island; IBP Site.

References

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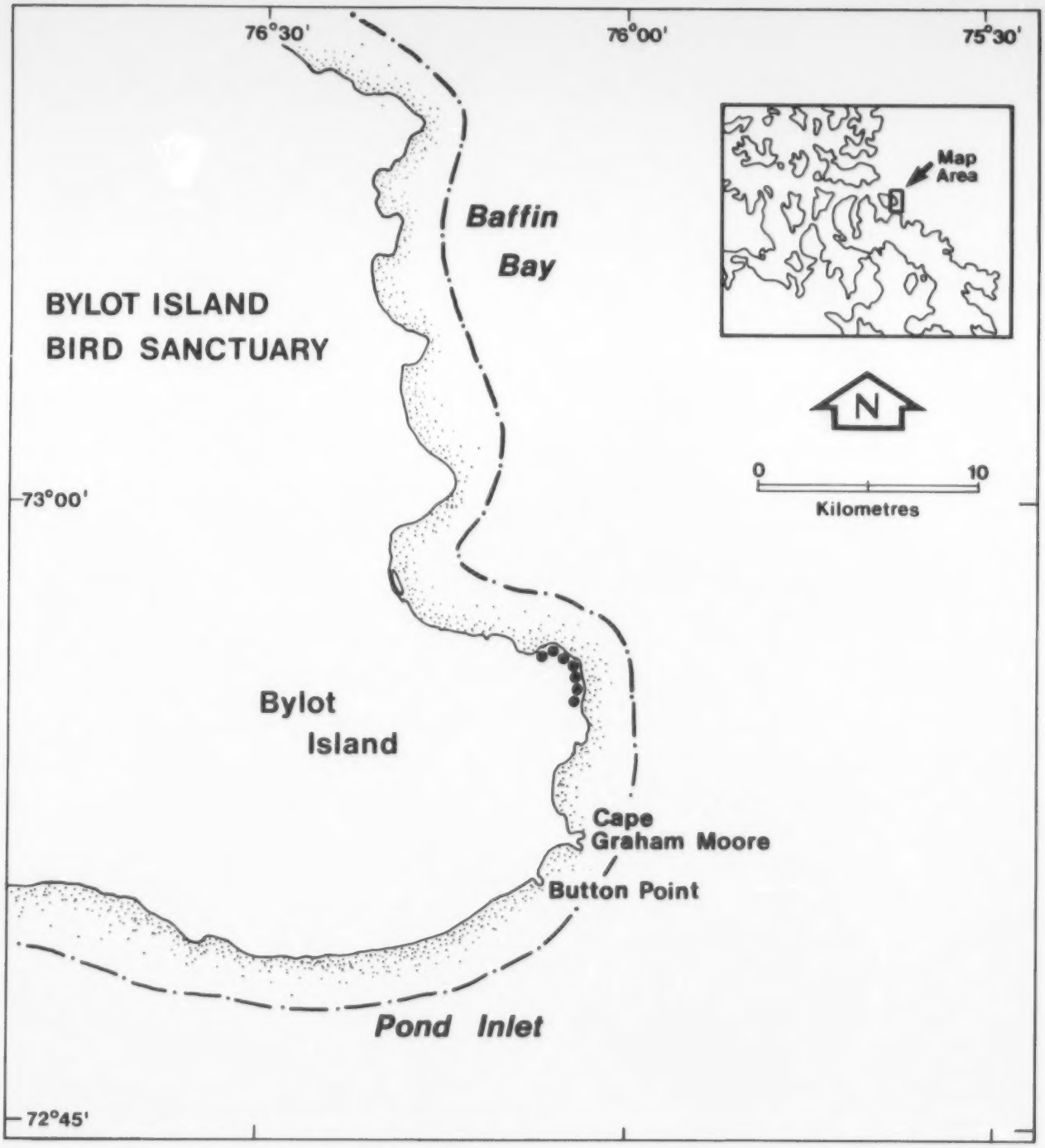
Zoltai, S.C.; McCormick, K.J.; Scotter, G.W. 1983. A natural resource survey of Bylot Island and adjacent Baffin Island, Northwest Territories. Can. For. Serv., Can. Wildl. Serv., Edmonton. 176 pp.


76°30'
76°00'
75°30'
Baffin
Bay
BYLOT ISLAND
BIRD SANCTUARY
Map
Area
N
0
10
Kilometres
73°00'
Bylot
Island
Cape
Graham Moore
Button Point
Pond Inlet
72°45'

Site 31: Cape Graham Moore

Location: 72°55′N, 76°05′W **Size: 1 km²**

Description

Cape Graham Moore is situated on the southeastern tip of Bylot Island, which lies northeast of Baffin Island at the entrance to Lancaster Sound. Most of the island consists of the Precambrian metamorphic rock of the Byam Martin Mountains, which reach a height of 1900 m above sea level. Numerous glaciers extend from these mountains towards the sea.

At the southeastern tip of Bylot Island, steep cliffs of metasedimentary and metavolcanic rock rise 150 m above the sea (Jackson et al. 1975).

Biological value

A colony of approximately 20 000 pairs of Thick-billed Murres and 3000 pairs of Black-legged Kittiwakes is located on 0.8 km of cliffs about 7 km north of Cape Graham Moore (Nettleship 1980). This colony constitutes over 1% of the Canadian population of each of these species. Recent surveys are needed to update these estimates. The birds arrive in May and leave the colony in September.

White whales, narwhals, harp seals, and ringed seals migrate through Pond Inlet or north along the coast of Bylot Island into Lancaster Sound. The north and east coasts of Bylot Island are a maternity denning area and summer retreat for polar bears (Schweinsburg et al. 1982).

Sensitivities

Seabird colonies are sensitive to disturbance and the pollution of offshore waters. Thick-billed Murres are particularly sensitive, because they are flightless when they depart from their colonies.

Potential conflicts

Lancaster Sound, Barrow Strait, and Prince Regent Inlet have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Increased tourist-related activities could also be a source of disturbance (Marshall Macklin Monaghan Ltd. 1982).

Status of Key Habitat Site

Cape Graham Moore occurs within Bylot Island Bird Sanctuary and within the area proposed for a national park on Bylot Island and northern Baffin Island, IBP Site.

References

Anonymous. 1982. The Lancaster Sound region: 1980–2000. Green Paper, Dep. Indian Affairs North. Dev., Ottawa. 102 pp.

Jackson, G.D.; Davidson, A.; Morgan, W.C. 1975. Geology of the Pond Inlet map-area, Baffin Island, District of Franklin. Pap. 74-24, Geol. Surv. Can., Ottawa. 33 pp.

Marshall Macklin Monaghan Ltd. 1982. Community tourism development plan — Pond Inlet. Unpubl. rep. for Gov. N.W.T. Econ. Dev. Tourism, Yellowknife. 79 pp.

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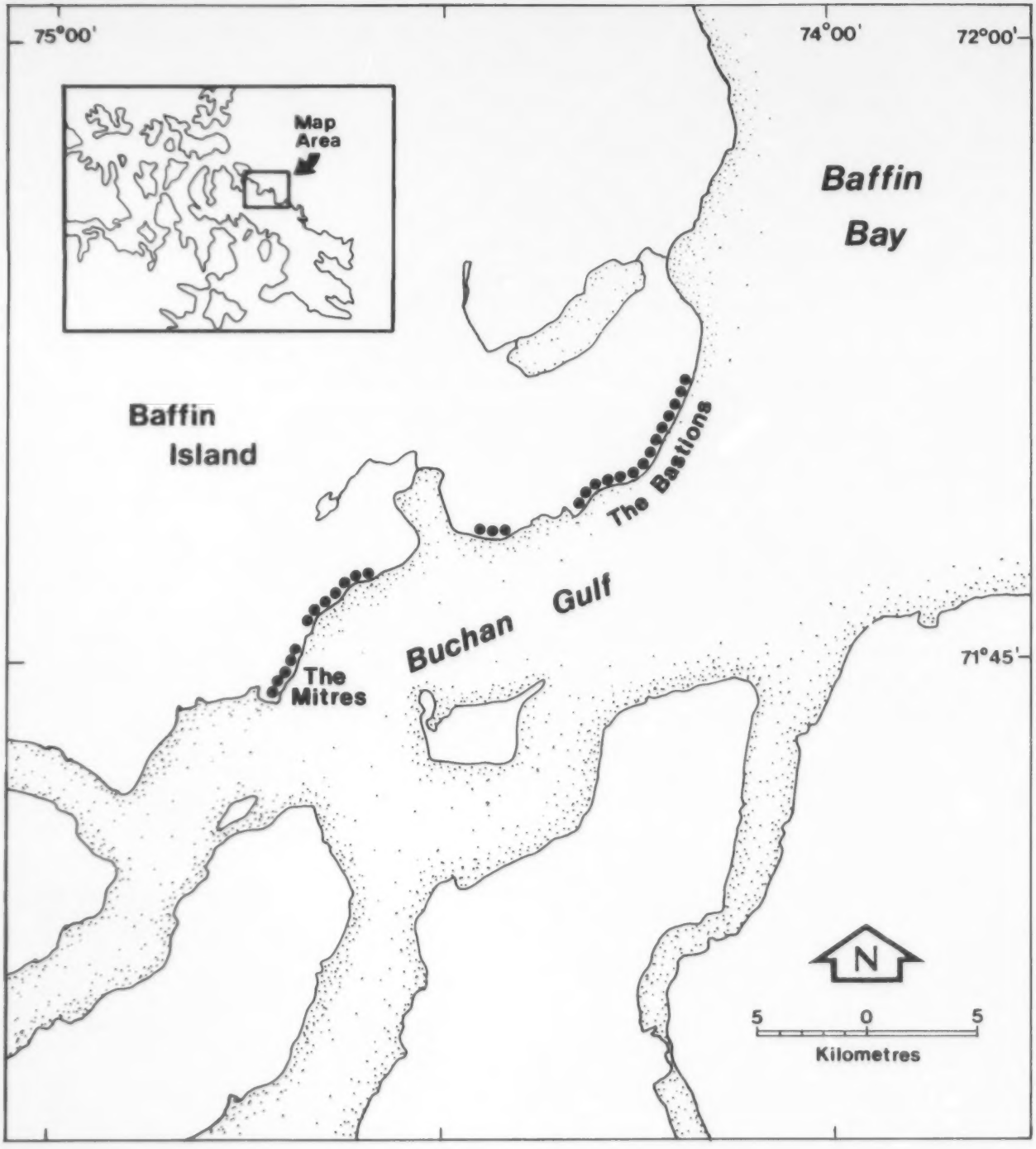
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.

Renaud, W.E.; Johnston, W.G.; Finley, K.J. 1981. The avifauna of the Pond Inlet region, NWT. Am. Birds 35(2):119–129.

Schweinsburg, R.E.; Lee, L.J.; Latour, P. 1982. Distribution, movement, and abundance of polar bears in Lancaster Sound, Northwest Territories. Arctic 35(1):159–169.


75°00'
74°00'
72°00'
Map Area
Baffin Bay
Baffin Island
The Bastions
Buchan Gulf
The Mitres
71°45'
N
5 0 5
Kilometres

Site 32: Buchan Gulf

Location: 71°50′N, 74°30′W **Size: 22 km²**

Description

Buchan Gulf is situated on the eastern coast of north Baffin Island about 200 km south of Pond Inlet. The region is part of the Davis Highlands of the Canadian Shield and is underlain by Precambrian metamorphic rock (Jackson et al. 1975). The Highlands are a mountain belt covered by glaciers and penetrated by long fiords.

The north coast of Buchan Gulf is formed by two promontories, The Bastions and The Mitres. These precipitous cliffs rise over 600 m above the sea.

Biological value

In 1973, approximately 25 000 pairs of Northern Fulmars (7% of the Canadian population) were estimated on the grassy rock ledges and pinnacles of The Bastions and The Mitres (Nettleship 1980). The colony extends for 22 km along the cliffs. Recent surveys are needed to confirm the current importance of this site to fulmars. The fulmars occupy the rock ledges of the steep coastal cliffs and pinnacles from early April to late September.

A few narwhals occur in the fiords that extend from Buchan Gulf.

Sensitivities

Seabirds are sensitive to disturbance and pollution of their marine feeding areas.

Potential conflicts

Lancaster Sound and vicinity and western Baffin Bay and Davis Strait have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1979, 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

IBP Site.

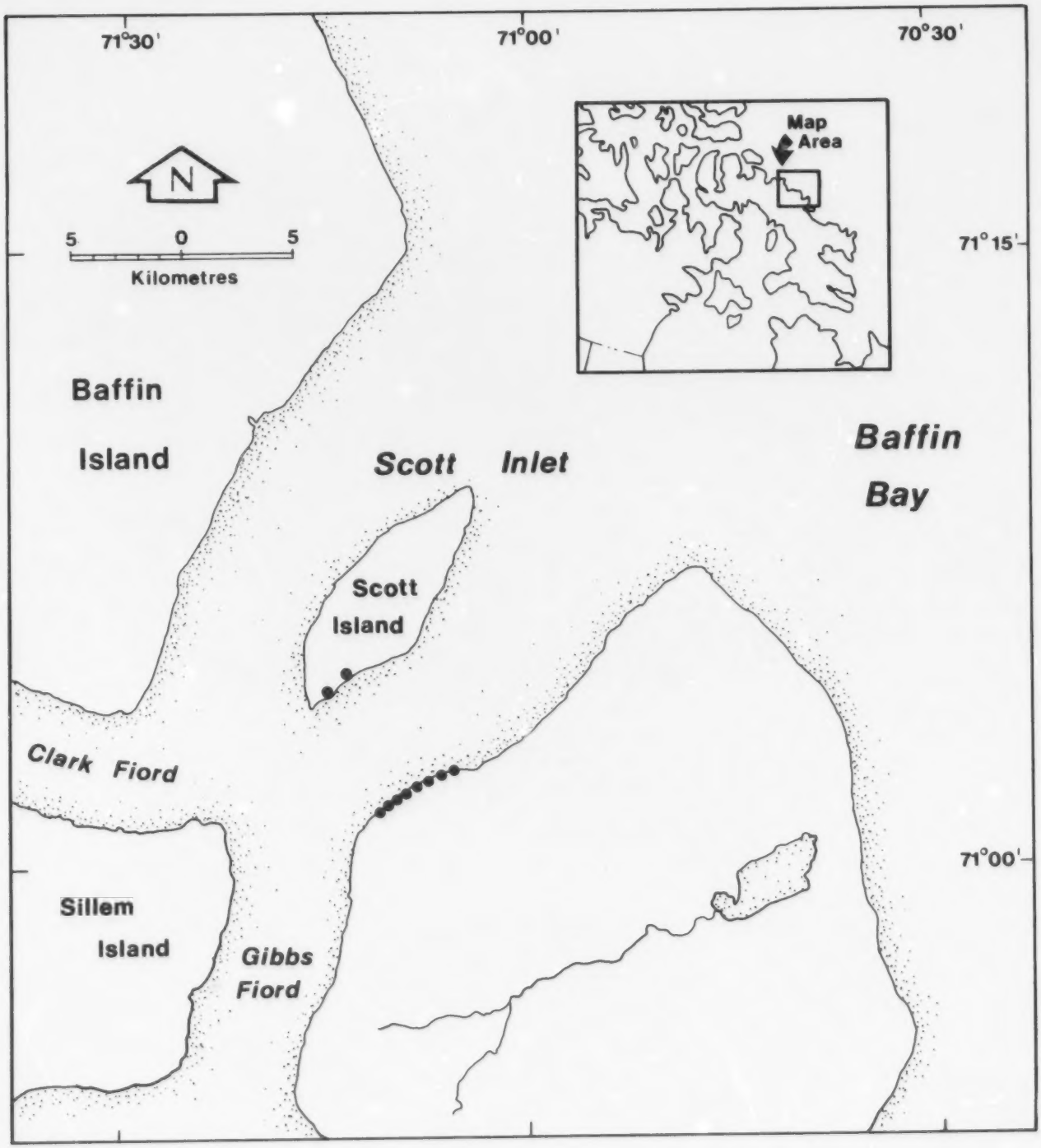
References

Anonymous. 1979. Initial environmental assessment. Proposed Baffin Bay exploratory drilling program. Unpubl. rep., Petro-Canada Ltd., Calgary. 414 pp.

Anonymous. 1982. The Lancaster Sound region: 1980–2000. Green Paper, Dep. Indian Affairs North. Dev., Ottawa. 102 pp.

Jackson, G.D.; Davidson, A.; Morgan, W.C. 1975. Geology of the Pond Inlet map-area, Baffin Island, District of Franklin. Pap. 74-24, Geol. Surv. Can., Ottawa. 33 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.


71°30'
71°00'
70°30'
71°15'
71°00'
N
5 0 5
Kilometres
Map Area
Baffin Island
Scott Inlet
Baffin Bay
Scott Island
Clark Fiord
Sillem Island
Gibbs Fiord

Site 33: Scott Inlet

Location: 71°03′N, 71°08′W **Size: 5 km²**

Description

Scott Inlet is located on the east coast of Baffin Island, about 120 km northwest of the settlement of Clyde. The entrance to the inlet is divided by Scott Island, an island some 600 m high and 11 km long. About 6 km southwest of Scott Island, the inlet is further divided by Sillem Island into Gibbs Fiord to the south and Clark Fiord to the north. Precipitous cliffs, up to 365 m high, line the southern coastline of Scott Island and the adjacent mainland. Numerous ice caps and extensive snow fields cover much of Sillem Island and the surrounding mainland.

Biological value

In 1973, a colony of approximately 25 000 breeding pairs of Northern Fulmars (7% of the Canadian population) extended for 5 km along the southeast mainland side of Scott Inlet, immediately north of the entrance to Gibbs Fiord (Nettleship 1980). Recent surveys are needed to confirm the current importance of this site to fulmars. The fulmars occupy the rock ledges of the steep coastal cliffs and pinnacles from early April to late September.

Approximately 100 pairs of Glaucous Gulls nest in two colonies on southwest Scott Island and are also scattered throughout the fulmar colony (Nettleship 1980).

White whales and narwhals concentrate in the offshore waters of Baffin Bay. Walruses, polar bears, and harp, bearded, and ringed seals also frequent the area near Scott Inlet.

Sensitivities

Fulmars are sensitive to disturbance and pollution of offshore feeding areas.

Potential conflicts

Lancaster Sound and vicinity and western Baffin Bay and Davis Strait have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1979, 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

IBP Site.

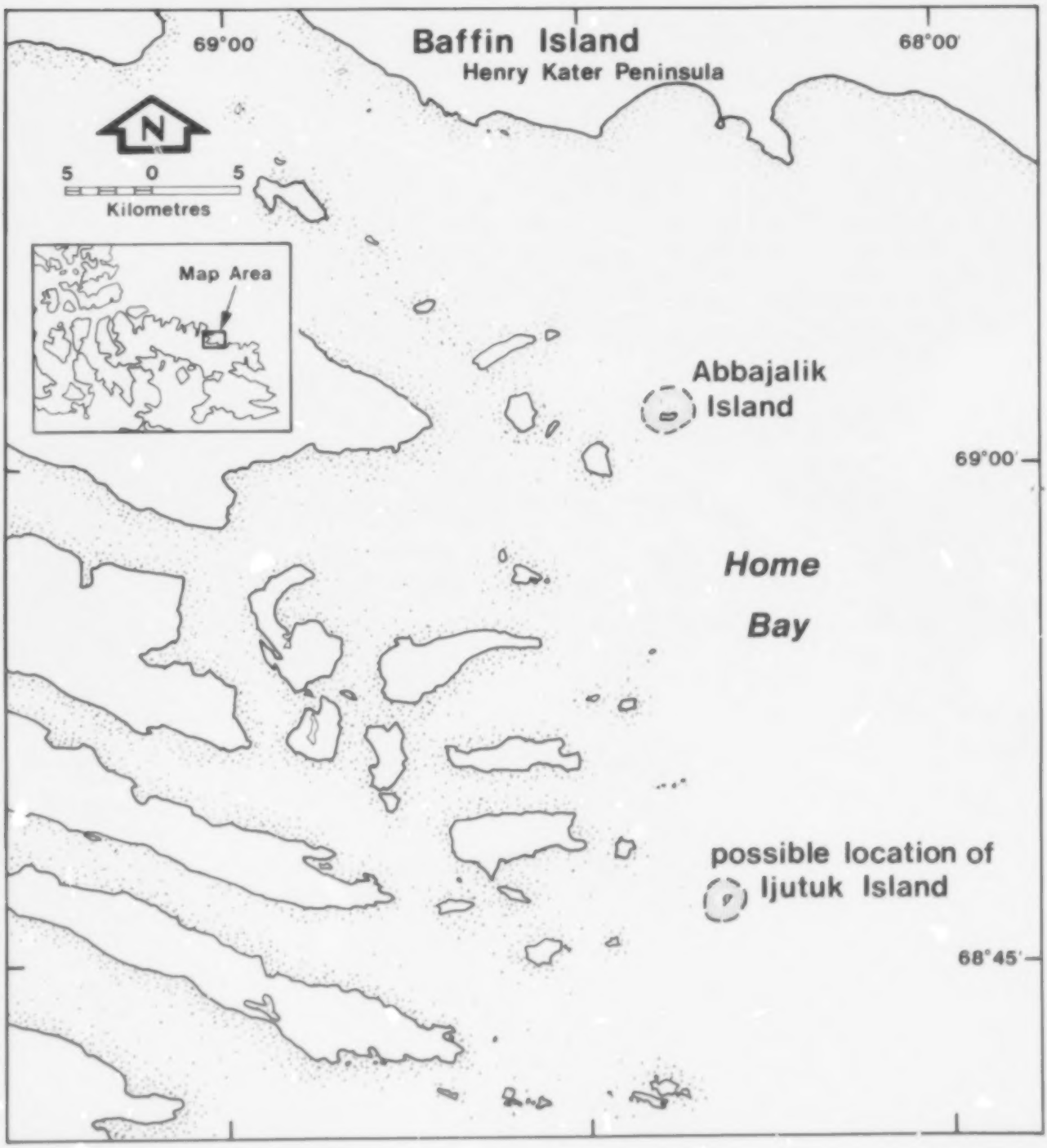
References

Anonymous. 1979. Initial environmental assessment. Proposed Baffin Bay exploratory drilling program. Unpubl. rep., Petro-Canada Ltd., Calgary. 414 pp.

Anonymous. 1982. The Lancaster Sound region: 1980–2000. Green Paper, Dep. Indian Affairs North. Dev., Ottawa. 102 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.

Site 34: Abbajalik and Ijutuk Islands



Site 34: Abbajalik and Ijutuk Islands

Location: 69°02'N, 67°23'W **Size: 1 km²**

Description

Abbajalik and Ijutuk are two small islands in Home Bay off the east coast of Baffin Island, approximately 75 km north of Auyuittuq National Park. Broughton Island, the nearest community, is located on Baffin Island about 130 km southeast of this site.

Abbajalik Island is located close to the spring floe edge. It has an hourglass shape, with different terrain on either end (Finley and Evans 1984). The east end consists of boulder moraine. The location of Ijutuk Island is tentative, and a description is not available.

Biological value

Abbajalik Island and Ijutuk Island are the only reported breeding sites for Dovekies in Canada (Finley and Evans 1984; Nettleship and Evans 1985; D.N. Nettleship, pers. commun.). Finley and Evans were informed by a local Inuk, Apak Qaqqasiq, of a colony on Abbajalik Island; all three visited the site on 20 August 1983. Among the boulders at the east end of the island, they found two addled eggs and two chicks, one of which was near fledging. Several small flocks of adults were also seen flying about the island. The authors suspected that most chicks would have fledged by the time of their visit; peak fledging occurs in mid-August in Northwest Greenland, where millions of Dovekies nest (Roby et al. 1981). Enhanced growth of vegetation and nitrophilous lichens, coupled with the authors' find of an ancient baleen Dovekie snare, attested to the past use of the colony.

Ijutuk Island was not visited by Finley and Evans; however, Qaqqasiq indicated to them that the colony there was larger than the one at Abbajalik Island. Only a tentative location could be given by the authors.

Based on the above observations and studies in Greenland, Dovekies likely occupy the colonies from early May to late August (Finley and Evans 1984; Harris and Birkhead 1985).

Approximately 500 Arctic Terns, along with some Common Eiders, nest on Abbajalik Island (Finley and Evans 1984).

Studies are needed to determine the size of colonies at both islands and to investigate any other potential sites in the region.

Sensitivities

Auks are sensitive to human, aircraft, and boat disturbance. Pollution in Davis Strait may affect feeding areas.

Potential conflicts

Lancaster Sound and vicinity and western Baffin Bay and Davis Strait have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1978, 1979, 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

No special status.

References

Anonymous. 1978. Environmental impact statement for exploratory drilling in Davis Strait region. Unpubl. rep., Imperial Oil Ltd., Aquitaine Co. Canada Ltd., Canada Cites Service Ltd. 31 pp.

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Finley, K.J.; Evans, C.R. 1984. First Canadian breeding record of the Dovekie (*Alle alle*). Arctic 37(3):288–289.

Harris, M.P.; Birkhead, T.R. 1985. Breeding ecology of the Atlantic Alcidae. Pages 155–204 *in* D.N. Nettleship and T.R. Birkhead (eds.). The Atlantic Alcidae. Academic Press, London, U.K.

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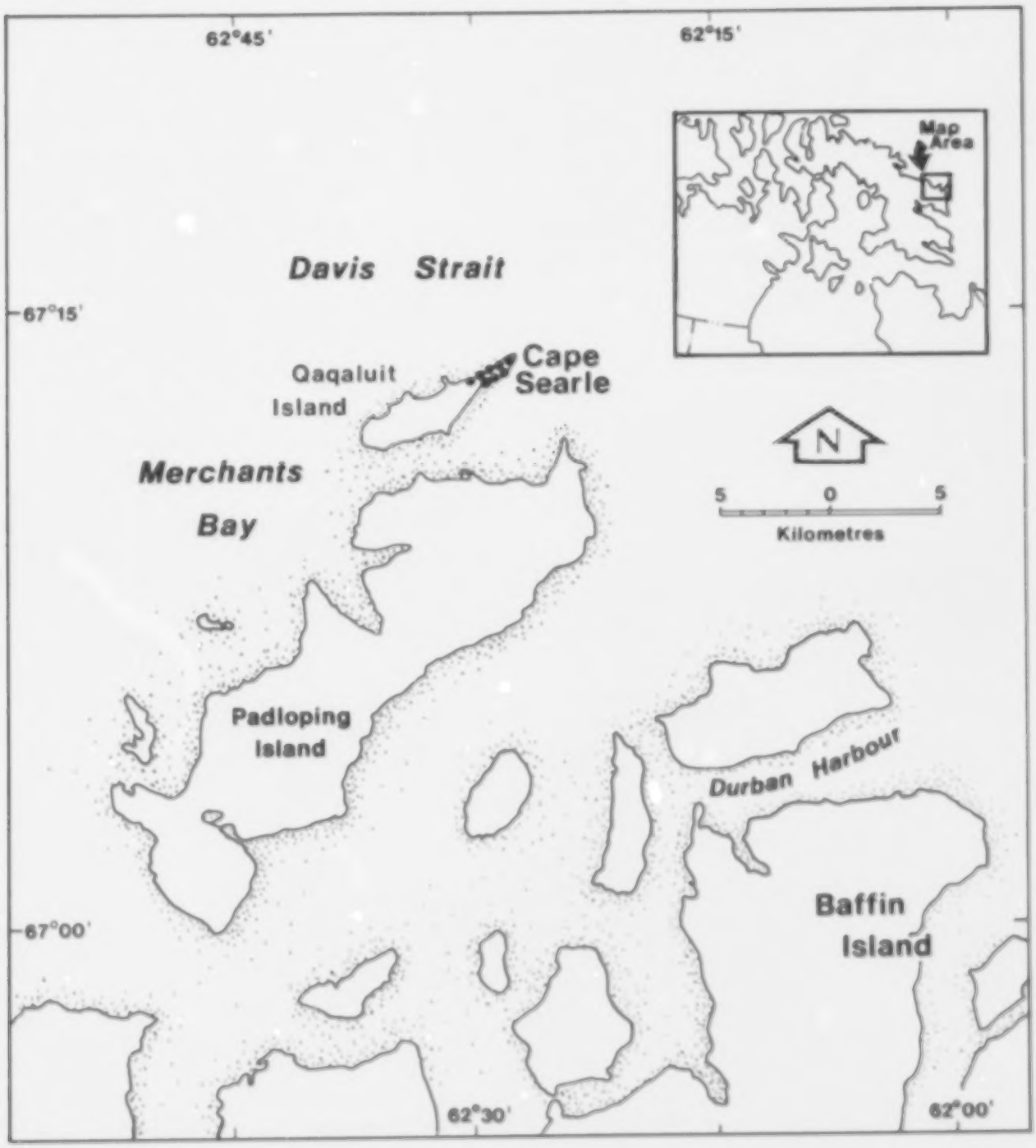
Roby, D.D.; Brink, K.L.; Nettleship, D.N. 1981. Measurements, chick meals and breeding distribution of Dovekies (*Alle alle*) in Northwest Greenland. Arctic 34(3):241–248.


62°45'
62°15'
Map Area
Davis Strait
67°15'
Qaqaluit Island
Cape Searle
Merchants Bay
N
5 0 5
Kilometres
Padloping Island
Durban Harbour
Baffin Island
67°00'
62°30'
62°00'

Site 35: Cape Searle

Location: 67°14′N, 62°28′W **Size: 2 km²**

Description

Cape Searle is located on the northeastern tip of Qaqaluit Island in Merchants Bay, eastern Baffin Island. Much of the Cumberland Peninsula is composed of Precambrian metamorphic rock of the Davis Highlands (Bostock 1964). However, Qaqaluit Island consists of a Tertiary-type basalt flow, and Cape Searle itself is composed of cross-bedded agglomerates and tuffaceous material (Kidd 1953). Cape Searle consists of two huge towers that rise 430 m above the sea. Although the cliffs are rugged, with numerous crevasses and jagged pinnacles, the flatter summits are covered in luxuriant vegetation.

Biological value

The largest Northern Fulmar colony in Canada occupies the two rock towers of Cape Searle. The colony is in the order of 100 000 pairs (Nettleship 1980), which represents approximately 27% of the Canadian population. The estimate is based on only one survey (1973) and requires updating. Nonetheless, it clearly indicates the importance of Cape Searle to Northern Fulmars.

The fulmars nest on the cliffs at all heights, but the density is greatest near the top. The grassy summits are also covered with nesting fulmars. The birds, which arrive about mid-April and leave by early October, forage within an 80-km radius of the site (Wynne-Edwards 1952).

Glaucous Gulls and Black Guillemots also nest in the area in small numbers (Nettleship 1980). Harp seals and walruses frequent the area. Polar bears are occasionally seen in the area and use the seaward tips of peninsulas for maternity dens (Stirling et al. 1980).

Sensitivities

Nesting fulmars are sensitive to disturbance and pollution of their feeding areas.

Potential conflicts

Lancaster Sound and vicinity and western Baffin Bay and Davis Strait have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1978, 1979, 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

IBP Site.

References

Anonymous. 1978. Environmental impact statement for exploratory drilling in Davis Strait region. Unpubl. rep., Imperial Oil Ltd., Aquitaine Co. Canada Ltd., Canada Cities Service Ltd. 31 pp.

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Bostock, H.S. 1964. A provisional physiography map of Canada. Pap. 64-35, Geol. Surv. Can., Ottawa. 24 pp.

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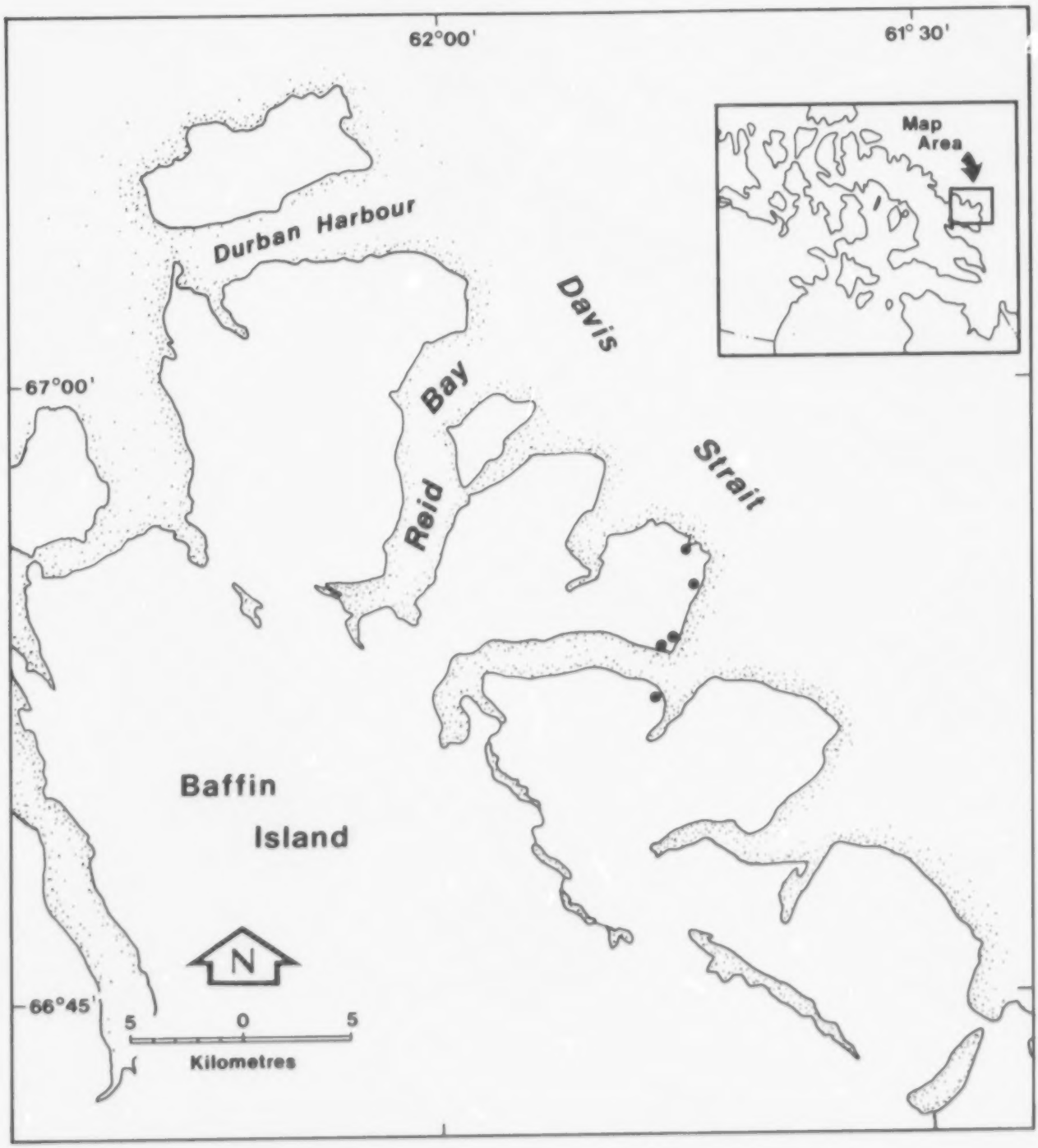
Stirling, I.; Calvert, W.; Andriashek, D. 1980. Population ecology studies of the polar bear in the area of southeastern Baffin Island. Occas. Pap. No. 44, Can. Wildl. Serv., Ottawa. 31 pp.

Wynne-Edwards, V.C. 1952. The fulmars of Cape Searle. Arctic 5(2):105–117.

Site 36: Reid Bay



Site 36: Reid Bay

Location: 66°56′N, 61°46′W **Size: 5 km²**

Description

The south shore of Reid Bay is part of a broad promontory that extends about 11 km southward to a large unnamed fiord, 37 km north of Cape Dyer. An indentation on the east coast of the promontory divides it into two steep headlands, with inland elevations reaching almost 915 m above sea level. The south headland is made up of a complex series of steep rock pinnacles and ridges bordered by a high talus slope and beach. Offshore, there are numerous rocks and islets. The area is bounded by a series of steep promontories that extend south to Cape Dyer.

Biological value

The two northern cliff faces south of Reid Bay support two colonies of Thick-billed Murres, comprising approximately 200 000 breeding pairs (Nettleship 1980). This is the second largest concentration of this species in the Northwest Territories and represents approximately 14% of the Canadian population. Murres are present from mid-May to early September.

About 10 000 breeding pairs of Northern Fulmars (approximately 3% of the Canadian population) occupy the three southern colonies in the area (Nettleship 1980). Fulmars are present at the site from early May until mid-September.

The estimates for both murres and fulmars are based on only one survey (1973) and require updating.

A few Black Guillemots and Glaucous Gulls also nest in the area (Nettleship and Smith 1975).

Sensitivities

Seabirds are sensitive to disturbance and the pollution of offshore waters. Murres are particularly vulnerable in the late summer, when they undertake a flightless migration through Davis Strait to their wintering areas.

Potential conflicts

Lancaster Sound and vicinity and western Baffin Bay and Davis Strait have potential to become marine shipping routes and areas of hydrocarbon exploration and development (Anon. 1978, 1979, 1982). Oil spills associated with drilling or shipping activities could endanger large numbers of seabirds and pollute their feeding areas.

Status of Key Habitat Site

IBP Site.

References

Anonymous. 1978. Environmental impact statement for exploratory drilling in Davis Strait region. Unpubl. rep., Imperial Oil Ltd., Aquitaine Co. Canada Ltd., Canada Cites Service Ltd. 31 pp.

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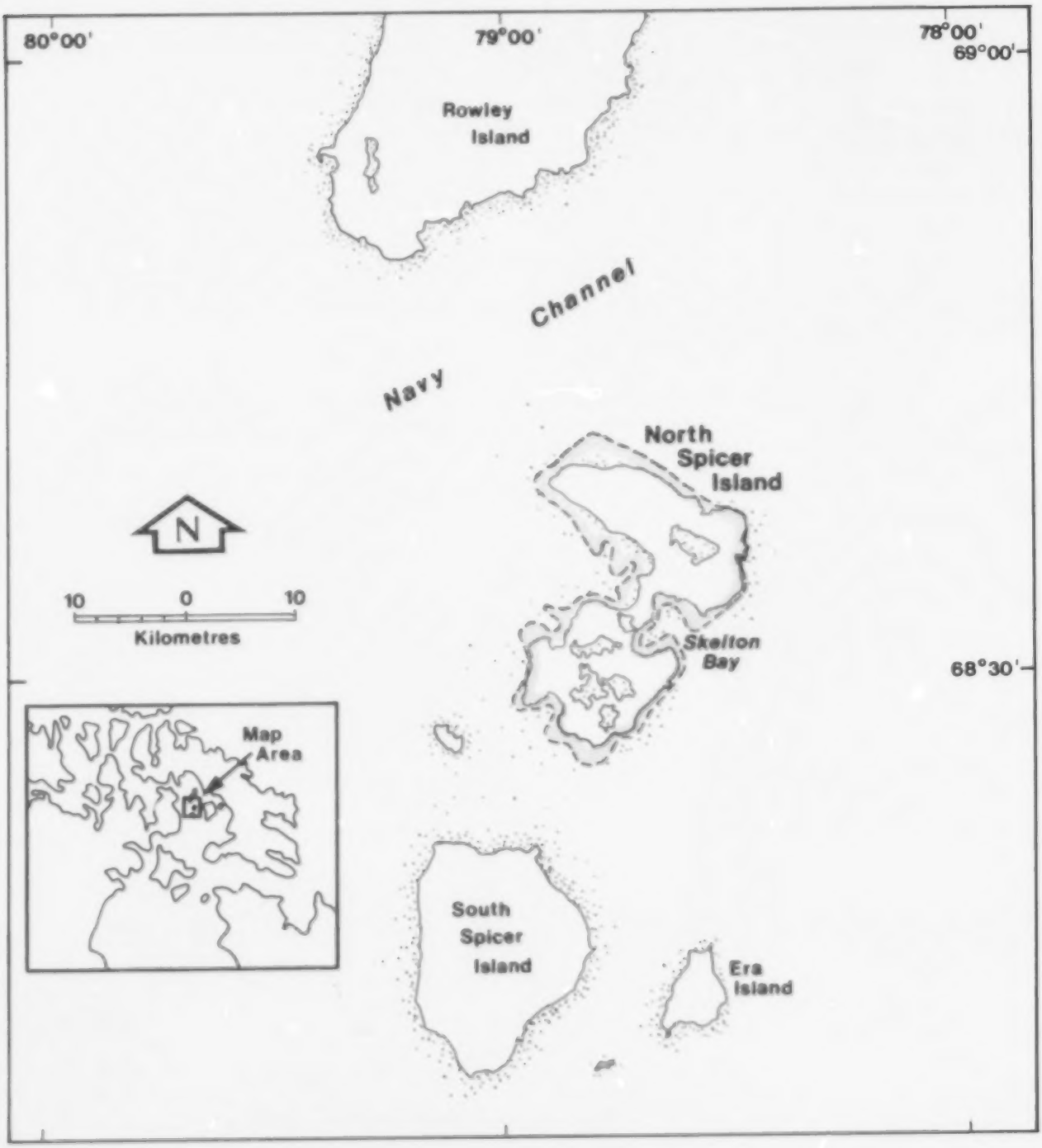
Nettleship, D.N.; Smith, P.A. (eds.). 1975. Ecological sites in northern Canada. Can. Comm. Int. Biol. Program, Conserv. Terr., Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.


80°00'
79°00'
78°00'
69°00'
Rowley
Island
Channel
Navy
North
Spicer
Island
N
10
0
10
Kilometres
Skelton
Bay
68°30'
Map
Area
South
Spicer
Island
Era
Island

Site 37: North Spicer Island

Location: 68°33′N, 78°45′W **Size: 341 km²**

Description

North Spicer Island is situated in northern Foxe Basin approximately midway between Prince Charles Island and Melville Peninsula. The island is low-lying, not exceeding 100 m in elevation. Wet sedge meadows and areas of standing water cover much of the island. Raised beaches occur on the east coast south of Skelton Bay.

Biological value

A colony of approximately 400 Atlantic Brant (subspecies *hrota*) was noted on this island in 1979 (Reed et al. 1980). Approximately 1250 adults were banded and 142 goslings were observed during a subsequent survey in 1980 (Reed and Dupuis 1980). This represents 1% of the national population of Atlantic Brant. Brant occurred over all the island, although they were more common along the coast. Further surveys are required to clarify the size and extent of this colony.

Sabine's Gulls, Arctic Terns, Oldsquaws, Pacific Loons, and Red-throated Loons were also noted on the island (Gaston et al. 1986; A. Reed, pers. commun.).

Sensitivities

Nesting and moulting Brant are sensitive to disturbance.

Potential conflicts

None.

Status of Key Habitat Site

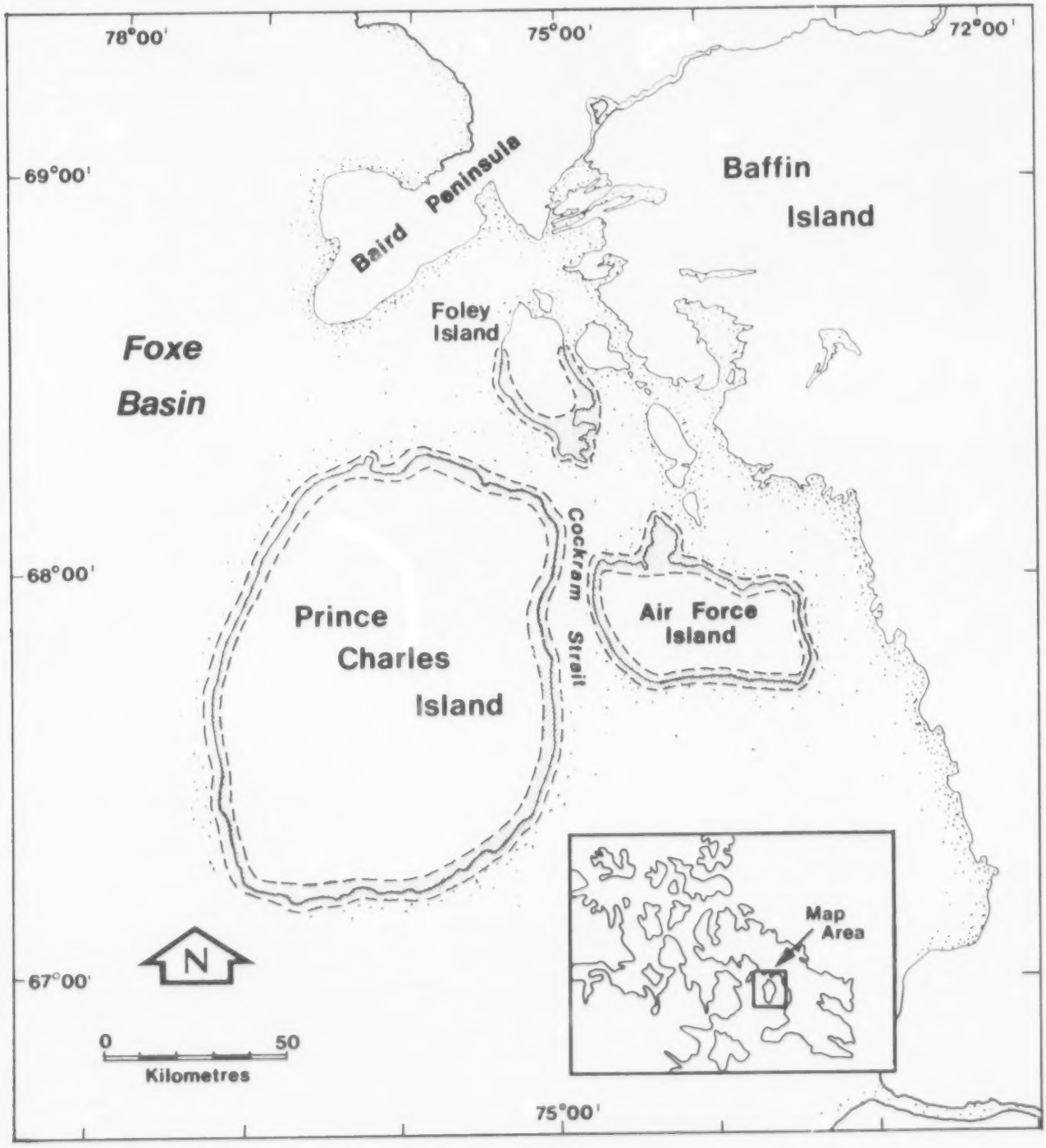
No special status.

References

Gaston, A.J.; Decker, R.; Cooch, F.G.; Reed, A. 1986. The distribution of larger species of birds breeding on the coasts of Foxe Basin and Northern Hudson Bay, Canada. Arctic 39(4):285–296.

Reed, A.; Dupuis, P. 1980. A preliminary report on Greater Snow Geese and Atlantic Brant investigations near Foxe Basin and northern Baffin Island, NWT, August 1980. Unpubl. rep., Can. Wildl. Serv., Ste. Foy. 18 pp. + appendices.

Reed, A.; Dupuis, P.; Fischer, K.; Moser, J. 1980. An aerial survey of breeding geese and other wildlife in Foxe Basin and northern Baffin Island, Northwest Territories, July 1979. Prog. Note No. 114, Can. Wildl. Serv., Ottawa. 21 pp.


78°00'
75°00'
72°00'
69°00'
68°00'
67°00'
Baird Peninsula
Baffin Island
Foley Island
Foxe Basin
Cockram Strait
Prince Charles Island
Air Force Island
Map Area
N
0
50
Kilometres

Site 38: Foxe Basin Islands

Location: 68°00′N, 75°05′W **Size: 3000 km²**

Description

Prince Charles Island, Air Force Island, and Foley Island are located in east-central Foxe Basin. The coasts of these islands have extensive intertidal mud flats with gently sloping, well-vegetated shorelines. The inland areas, particularly on Prince Charles Island, are of low relief and dotted with small lakes and ponds. The islands are vegetated predominantly by a sedge–grass complex (Gaston et al. 1986; G. Cooch, pers. commun.).

Biological value

Prince Charles and Air Force islands are important breeding sites of Atlantic Brant and Sabine's Gulls. The estimated breeding population of Brant (subspecies *hrota*) for the two islands was 900 pairs in 1979, which is approximately 1% of the Canadian population. Larger numbers of moulting birds also use the coastal areas prior to fall migration (Reed et al. 1980). In July 1983, approximately 2300 Brant were seen along the coasts of the two islands (Gaston et al. 1986). The principal areas for Brant are the northern and southern shores of Prince Charles Island and the southern shore of Air Force Island. Several hundred nesting Lesser Snow Geese were recorded on Air Force Island and Prince Charles Island in 1975 (R. Kerbes, pers. commun.). In 1989, the few Snow Geese found nesting in the northwest of Prince Charles Island were all Greater Snow Geese (H. Boyd, pers. commun.).

Eleven colonies of Sabine's Gulls (407 birds) and 13 Arctic Tern colonies (526 birds) were observed in 1979 (Reed et al. 1980). In 1983, approximately 3700 Sabine's Gulls were seen along the coasts of Prince Charles, Air Force, and southern Foley islands (Gaston et al. 1986), which represents more than 18% of the Canadian population. Studies are needed to determine the yearly consistency of nesting in these areas.

King Eiders, Common Eiders, Oldsquaws, and Herring Gulls also nest along the coast and on inland ponds. Shorebirds are very abundant and more common on these islands than elsewhere in Northern Hudson Bay and Foxe Basin, but their populations have not been adequately assessed (Gaston et al. 1986).

Breeding birds arrive about mid-June and leave the area by mid-September.

Sensitivities

Nesting and moulting birds are sensitive to disturbance. Degradation of the coastal lowlands and pollution of surrounding marine areas would be detrimental to local populations.

Potential conflicts

None.

Status of Key Habitat Site

No special status.

References

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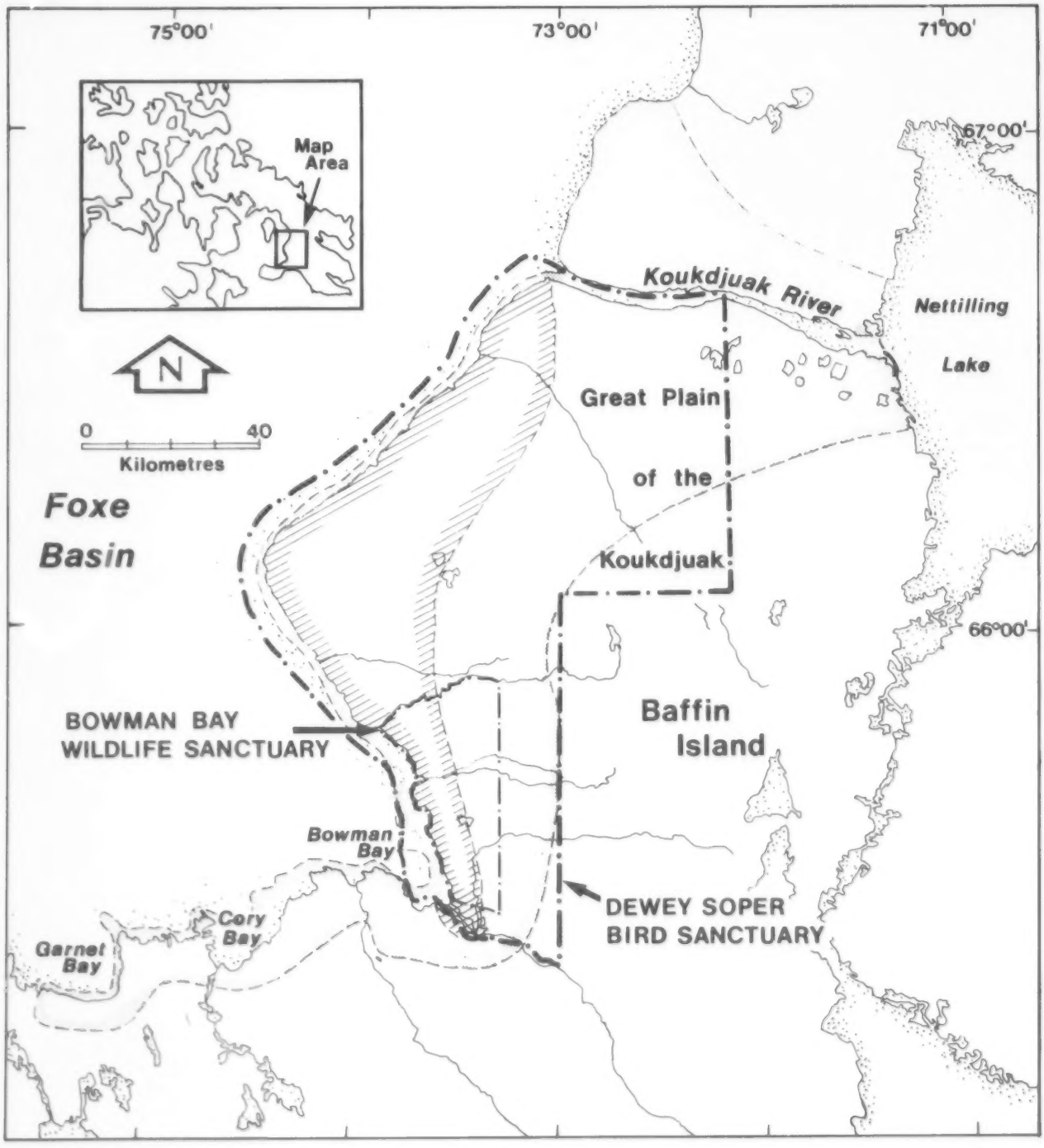
Reed, A.; Dupuis, P.; Fischer, K.; Moser, J. 1980. An aerial survey of breeding geese and other wildlife in Foxe Basin and northern Baffin Island, Northwest Territories, July, 1979. Prog. Note No. 114, Can. Wildl. Serv., Ottawa. 21 pp.

Site 39: Great Plain of the Koukdjuak



Site 39: Great Plain of the Koukdjuak

Location: 66°10′N, 74°00′W **Size: 12 931 km²**

Description

The Great Plain of the Koukdjuak is an extensive sedge lowland on Baffin Island, bordering the southeastern shores of Foxe Basin. Lack of relief on the plain and high tides in Foxe Basin combine to form a tidal zone that may extend up to 15 km inland. The wide, marshy plain, which is dotted with shallow round lakes and circular wetlands, is drained by innumerable small, sluggish streams. The underlying bedrock consists of limestones and shales of Paleozoic origin, with scattered granitic outcrops. The inland limit of the plain is marked by raised beach ridges 25–80 km from the coast.

Biological value

The largest goose colony in the world is located in this area. In the summer, over 1 million geese, mainly Lesser Snow Geese, are dispersed across the plain between Bowman Bay and the Koukdjuak River. In 1973, 223 300 breeding pairs of Lesser Snow Geese were recorded at this colony (Kerbes 1975). In 1979, 227 400 pairs (25% of the national population) were present (Reed et al. 1987). Flocks of nonbreeding birds are generally found inland from the coastal nesting areas. Small numbers of breeders and nonbreeders are also present in coastal regions adjacent to Cory and Garnet bays (Reed et al. 1980).

Geese arrive at the colony in the last week of May. After the hatch, adults and young disperse to inland feeding sites. The birds begin to leave the area by early to mid-September.

Over 1500 Sabine's Gulls nest within a few kilometres of the coast in this area (Gaston et al. 1986); this represents about 8% of the national population.

Other waterfowl species in the area include Canada Geese, Atlantic Brant, Oldsquaw, and King and Common eiders. Approximately 1600 Atlantic Brant (1% of the national population) were recorded in the Cape Dominion area (Reed et al. 1980). Red Phalaropes and other shorebirds are likely very abundant, but there are no data for these species.

A caribou migration route crosses the Koukdjuak River inland from the nesting area.

Sensitivities

Geese and other birds are sensitive to disturbance and the degradation of their lowland habitats.

Potential conflicts

None.

Status of Key Habitat Site

Most of the Key Habitat Site lies within the Dewey Soper Bird Sanctuary, which is also a Wetland of International Importance and an IBP Site. The Bowman Bay Wildlife Sanctuary is located within the Dewey Soper Bird Sanctuary.

References

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories — a background paper. Unpubl. rep., Can. Wildl. Serv., Edmonton. 3 vols. 370 pp.

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Kerbes, R.H. 1967. Investigations of waterfowl populations — eastern Arctic, progress report 1966–67. Unpubl. rep., Can. Wildl. Serv., Ottawa. 68 pp.

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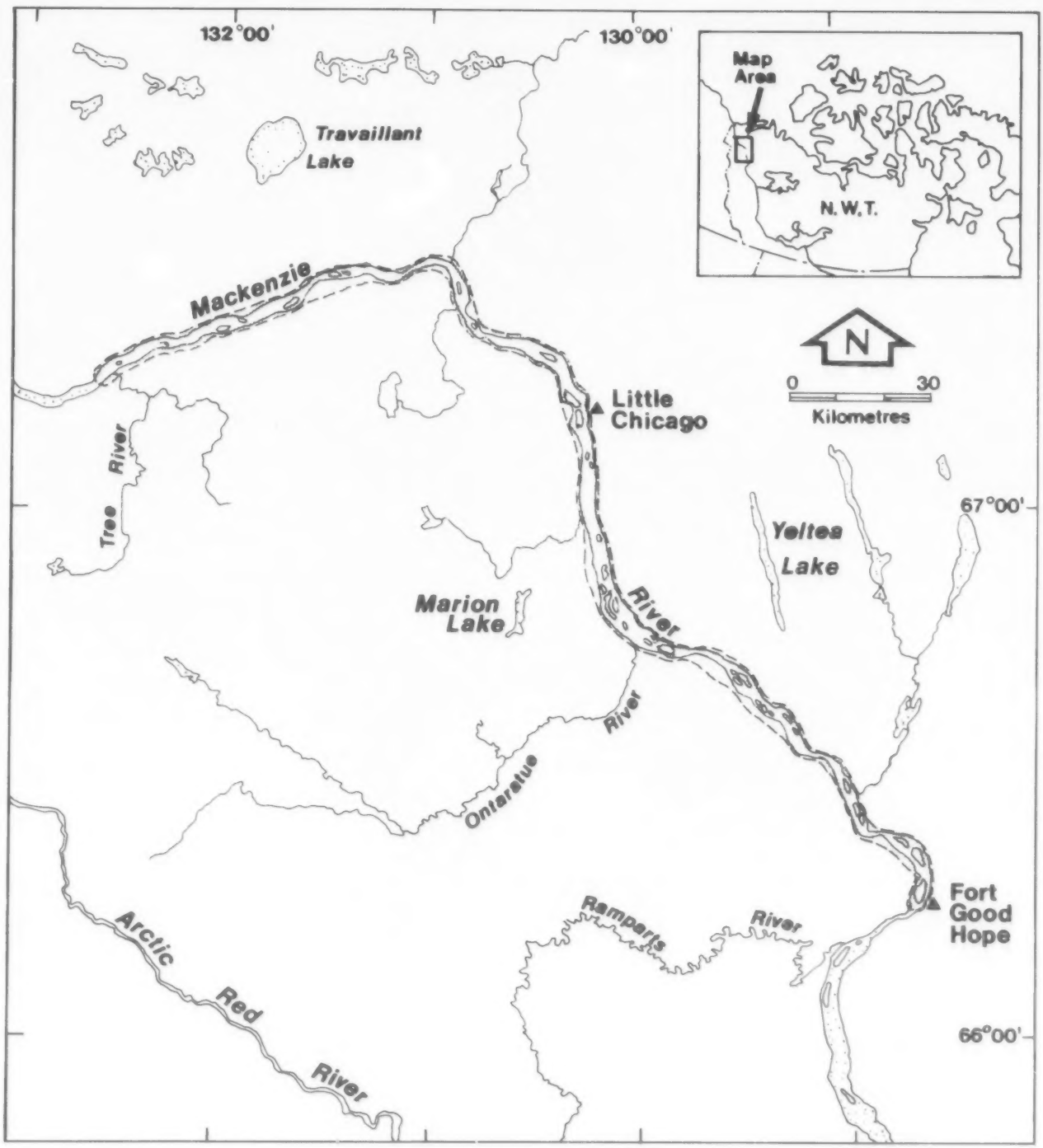
Kerbes, R.H. 1975. Lesser Snow Geese in the eastern Canadian Arctic. Rep. Ser. No. 35, Can. Wildl. Serv., Ottawa. 47 pp.

Reed, A.; Dupuis, P.; Fischer, K.; Moser, J. 1980. An aerial survey of breeding geese and other wildlife in Foxe basin and northern Baffin Island, NWT, July 1979. Prog. Note No. 114, Can. Wildl. Serv., Ottawa. 21 pp.

Reed, A.; Dupuis, P.; Smith, G.E.J. 1987. A survey of Lesser Snow Geese on Southampton and Baffin islands, NWT, 1979. Occas. Pap. No. 61, Can. Wildl. Serv., Ottawa. 22 pp.

Site 40: Lower Mackenzie River Islands



Site 40: Lower Mackenzie River Islands

Location: 67°00′N, 130°10′W **Size: 829 km²**

Description

This area includes the islands along 270 km of the Mackenzie River between Fort Good Hope and the confluence of Tree River.

Numerous alluvial deposits, ranging from exposed sand bars to forested islands, occur along the Mackenzie River. The islands and adjacent floodplains are composed of sediments overlying Devonian-aged bedrock. The edges of many of these low-lying islands are flooded each spring. As a result, central areas support mature stands of white spruce and balsam poplar, whereas willows abound in peripheral areas. Broad muddy or sandy shorelines are also common around many of the islands.

Biological value

The Mackenzie River is a major spring migration corridor for waterfowl, particularly Lesser Snow Geese. Virtually the entire western Arctic population of Lesser Snow Geese (approximately 210 000 breeding birds; Kerbes 1986) may migrate down the Mackenzie River valley. This represents about 11% of the Canadian population of Lesser Snow Geese. The islands near Fort Norman and Norman Wells (see Key Habitat Site 41) and between Fort Good Hope and Little Chicago are traditional spring stopover points (Barry 1967; Campbell and Shepard 1973; Salter et al. 1974). The geese arrive in early or mid-May and congregate on river islands where open water and accompanying exposed shorelines provide the only habitat for feeding during migration (Barry 1967; Boothroyd 1986). The duration of stay at the islands is generally short but is dependent on weather and snow conditions farther north.

In 1973, 13 800 Snow Geese were seen in the Little Chicago area during an aerial survey on 14 May (Salter et al. 1974). In 1972, 61 400 Snow Geese were observed on 20 May, and 63 900 were noted on 25 May in the same area (Campbell and Shepard 1973). In general, the number of Snow Geese varies from year to year (Boothroyd 1986).

In 1972, approximately 3250 Tundra Swans were noted between Norman Wells and Tree River on 20 May; 1940 were recorded on 25 May (Campbell and Shepard 1973). In 1973, nearly 1100 swans were observed on 14 May (Salter et al. 1974). The 1973 season was earlier than the 1972 season, and apparently fewer swans and geese staged in this area prior to dispersing to breeding areas.

Many thousands of other waterfowl also migrate down the Mackenzie River during spring. In 1972, there were more than 112 800 waterfowl along the river on 25 May, but fewer than 10 000 remained on 29 May (Campbell and Shepard 1973). In 1973, Salter et al. (1974) found 26 000 waterfowl between Ten Mile Island and Tree River on 14 May but only 1350 one week later. Use of the river islands is intense but of short duration.

These islands may also be used in the fall by geese forced south prematurely by poor weather (Barry 1967).

The islands are also used heavily by moose in the winter. The combination of poplar stands for cover and abundant willow for browse provides ideal winter habitat (Ruttan 1974).

Sensitivities

Staging waterfowl are sensitive to disturbance. Pollution of riverine areas and major fluctuations in water levels could also have detrimental effects on the waterfowl and their habitats.

Potential conflicts

This area is downstream from the Norman Wells oil field expansion project. However, the influence of this project on Snow Goose use of the Norman Wells area is minor and short-term (Boothroyd 1986). The Mackenzie River is also heavily used by barges.

Status of Key Habitat Site

No special status.

References

Barry, T.W. 1967. The geese of the Anderson River delta, Northwest Territories. Unpubl. Ph.D. thesis, Univ. of Alberta, Edmonton.

Boothroyd, P.N. 1986. Influence of the Norman Wells oilfield expansion project on Snow Geese. Unpubl. rep., Can. Wildl. Serv., Winnipeg. 60 pp.

Campbell, R.W.; Shepard, M.G. 1973. Spring waterfowl migration on the Mackenzie River from Norman Wells to Arctic Red River, NWT, 1972. *In* Interim Rep. No. 3(2), Appendix III. Towards an environmental impact assessment of the portion of the Mackenzie Gas Pipeline from Alaska to Alberta. Environ. Prot. Board, Winnipeg. 47 pp.

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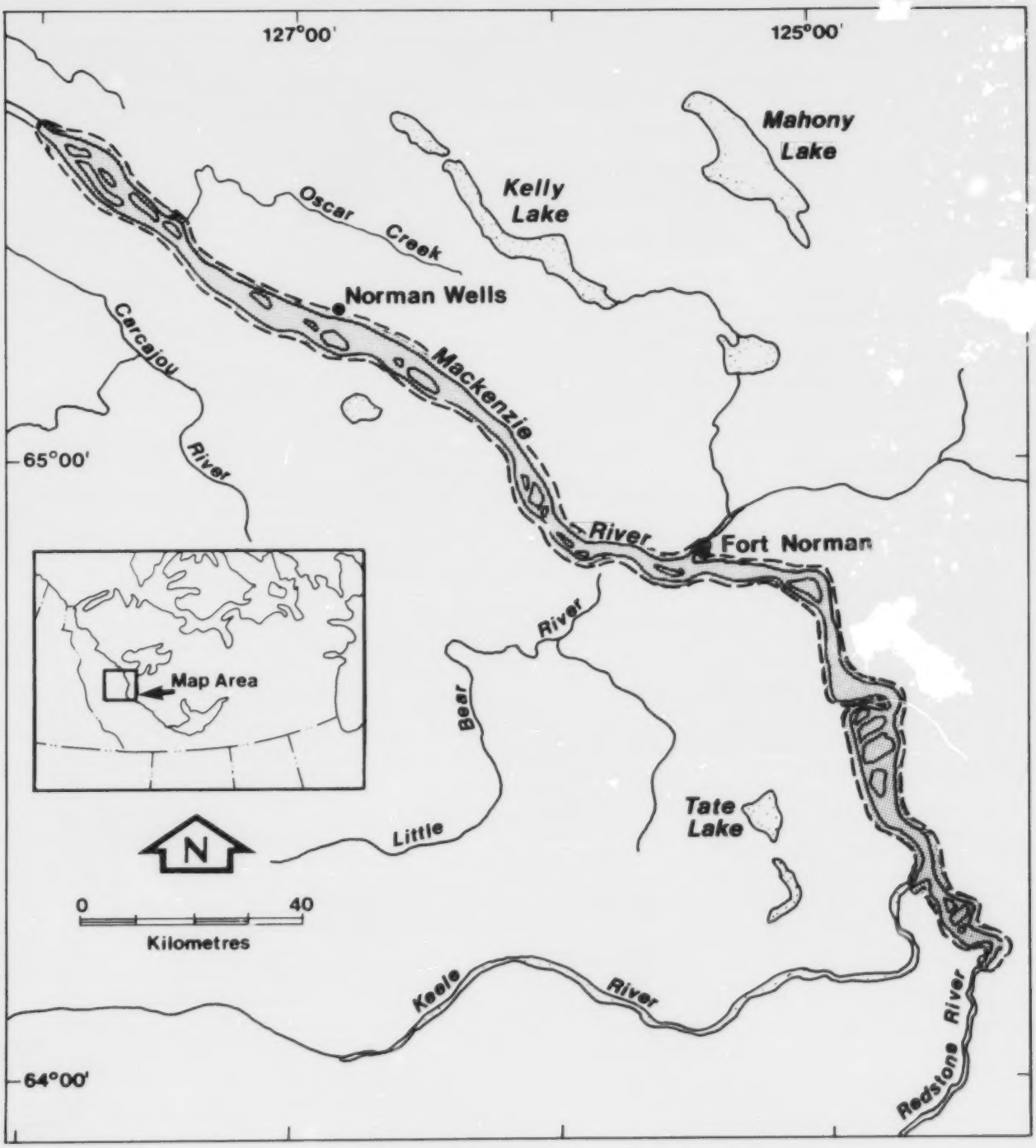
Site 41: Middle Mackenzie River Islands



Site 41: Middle Mackenzie River Islands

Location: 64°53′N, 125°35′W **Size: 1088 km²**

Description

This area includes the islands along 250 km of the Mackenzie River from Redstone River to north of Oscar Creek. Fort Norman and Norman Wells are located along this segment of the river.

The Mackenzie River is bordered on the east by the Franklin Mountains and on the west by the Mackenzie Mountains. The river has numerous islands, including some that are quite large and nonalluvial in origin. Near Norman Wells, the Mackenzie River has a broad, shallow riverbed; recent fine-grained alluvium borders many of the low-lying alluvial islands and point bars (Geddes and McCourt 1982).

White spruce and balsam poplar predominate on alluvial flats, and white birch predominates on upper terraces and levees. Willow and horsetail are common on the low-lying alluvial flats and along island margins. Pond shoreline vegetation consists of sedges, horsetails, and willows. Pondweed and emergents are found in the shallow ponds and abandoned channels (Geddes and McCourt 1982).

Biological value

The Mackenzie River is a major migration corridor for waterfowl. Virtually the entire western Arctic population of Lesser Snow Geese (approximately 210 000 breeding birds, which represents 11% of the Canadian population; Kerbes 1986) may migrate down the Mackenzie River valley. The islands near Fort Norman and Norman Wells and between Fort Good Hope and Tree River (see Key Habitat Site 40) are traditional spring stopover points (Barry 1967; Campbell and Shepard 1973; Salter et al. 1974). The geese arrive in early or mid-May and congregate on river islands where open water and exposed shorelines provide the only habitat for feeding during migration (Barry 1967; Boothroyd 1986). Their duration of stay is generally short but is dependent on weather and snow conditions farther north.

In 1972, an estimated 95 000 Lesser Snow Geese used the Mackenzie River. The maximum daily count around Norman Wells was approximately 28 600 geese on 25 May (Campbell and Shepard 1973). In 1973, the peak goose migration past Norman Wells occurred on 9 May (estimated 14 600 geese; Salter et al. 1974). In 1980, R. Webb Environmental Services Ltd. (1980) found nearly 26 000 Snow Geese on islands south of Norman Wells on 9 May, and 21 600 north of Norman Wells on 15 May. Fewer geese used the area in 1981 and 1982 (R. Webb Environmental Services Ltd. 1983). Numbers of all geese declined once the river ice cleared and the islands became flooded (R. Webb Environmental Services Ltd. 1980).

Greater White-fronted Geese, Canada Geese, Tundra Swans, and a variety of ducks also use the open water around the islands during spring migration. Dabbling ducks are the first to arrive, followed by dark geese, Snow Geese, swans, and, lastly, diving ducks. The birds feed extensively on horsetail and willow catkins. Dabbling ducks also use the islands for courtship and copulation (Campbell and Shepard 1973; R. Webb Environmental Services Ltd. 1980).

The islands provide prime winter moose habitat. Moose usually move to the islands in December and return to the mainland in March and April (Ruttan 1974).

Sensitivities

Staging waterfowl are sensitive to disturbance. Pollution and major fluctuations in water levels could damage habitat.

Potential conflicts

The expansion of activities at the Norman Wells oil field includes dredging and creating artificial islands in the river. However, the influence of this project on Snow Goose use of the Norman Wells area is minor and short-term (Boothroyd 1986). The Mackenzie River is also heavily used by barges.

Status of Key Habitat Site

No special status.

References

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Boothroyd, P.N. 1986. Influence of the Norman Wells oilfield expansion project on Snow Geese. Unpubl. rep., Can. Wildl. Serv., Winnipeg. 60 pp.

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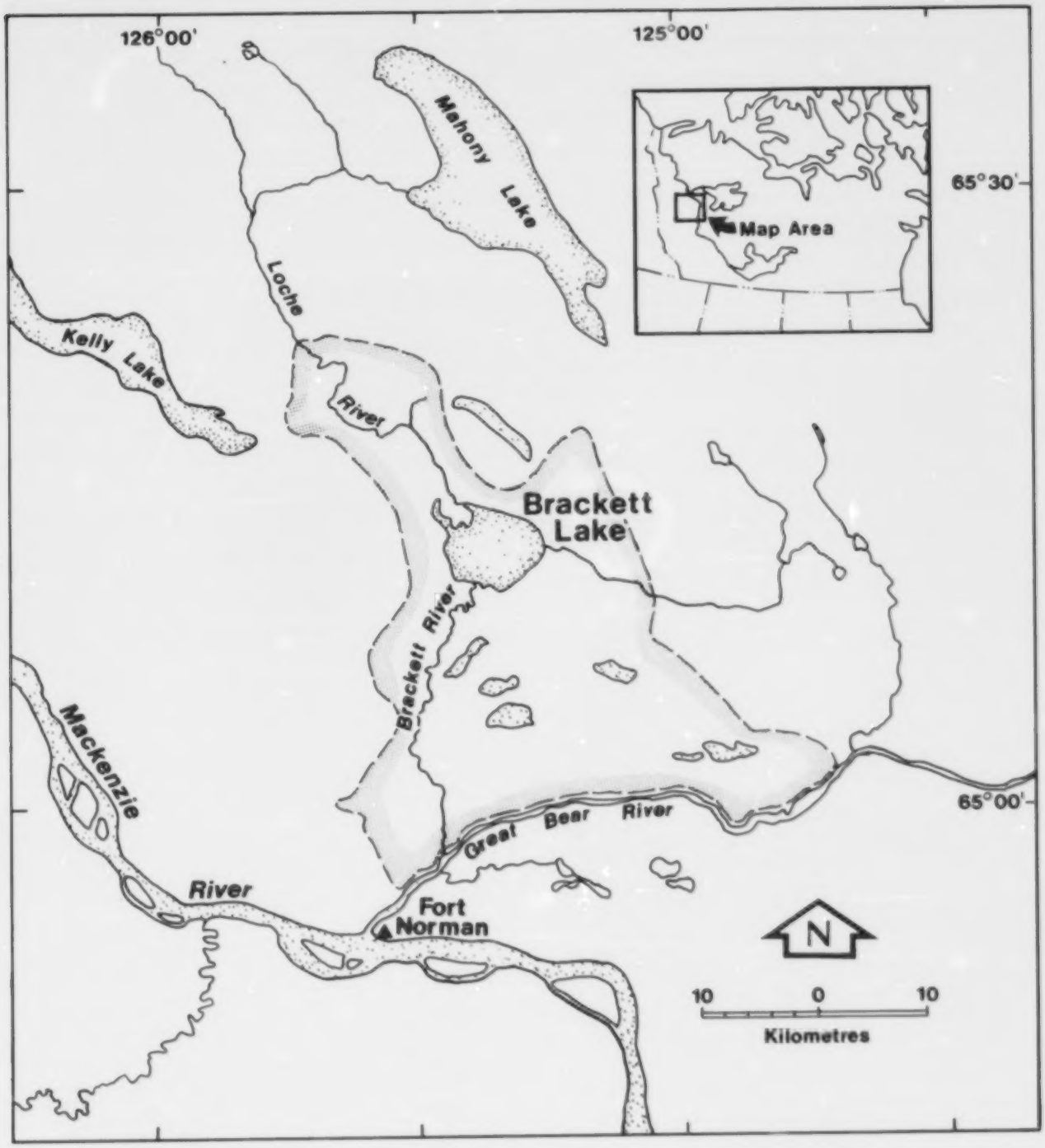
Salter, R.; Richardson, W.J.; Holdsworth, C. 1974. Spring migration of birds through the Mackenzie valley, NWT, April–May, 1973. Arct. Gas Biol. Rep. Ser. 28(2):1–168.


126°00'
125°00'
65°30'
65°00'
Mahony Lake
Loche
River
Kelly Lake
Brackett Lake
Brackett River
Mackenzie River
Great Bear River
Fort Norman
Map Area
N
10 0 10
Kilometres

Site 42: Brackett Lake

Location: 65°15′N, 125°10′W **Size: 1343 km²**

Description

The Brackett Lake area is located just north of the confluence of the Great Bear and Brackett rivers. The area is approximately 8 km northeast of the community of Fort Norman.

The wetlands and lakes surrounding Brackett Lake are on a low-lying, postglacial lake bed. Black spruce bogs, ericaceous shrubs, and extensive raised peat beds are the dominant vegetation features. The shores of lakes and ponds are lined with sedge meadows.

Biological value

A dense population of ducks (mostly scaup) (31 birds/km² in 1972) breeds in the Brackett Lake area (Davis 1974). In 1972, breeding duck density was about 5 birds/km² in the surrounding boreal forest. Densities ranged from 12 to 70 birds/km² in the Mackenzie Delta from 1974 to 1985 (Hawkings 1987). Brackett Lake is also heavily utilized for fall staging. More than 5000 Greater White-fronted Geese (2% of the national population) and an estimated 12 000 ducks have been recorded on the north and east shores of the lake and at the mouth of the Loche River in early September (Barry 1958). Flocks of up to 500 Greater White-fronted Geese and 1500 Tundra Swans have been observed during fall migration (Salter 1974). Larger numbers migrate through the area.

Shorebirds (Scolopacidae, such as Long-billed Dowitchers, Pectoral Sandpipers, and Lesser Yellowlegs) stage at Brackett Lake during autumn migration (Salter 1974), but the numbers are not documented.

Moose, black bears, muskrat, and beaver are common in this area. River otters also inhabit the Loche and Brackett rivers.

Sensitivities

Waterfowl, particularly moulting birds, are sensitive to disturbance. Low-lying habitats are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost.

Potential conflicts

None.

Status of Key Habitat Site

IBP Site.

References

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Davis, R.A. 1974. Aerial survey of bird populations along the route of the proposed gas pipeline in the Mackenzie District, NWT, summer 1971. Arct. Gas Biol. Rep. Ser. 11(1):1–156.

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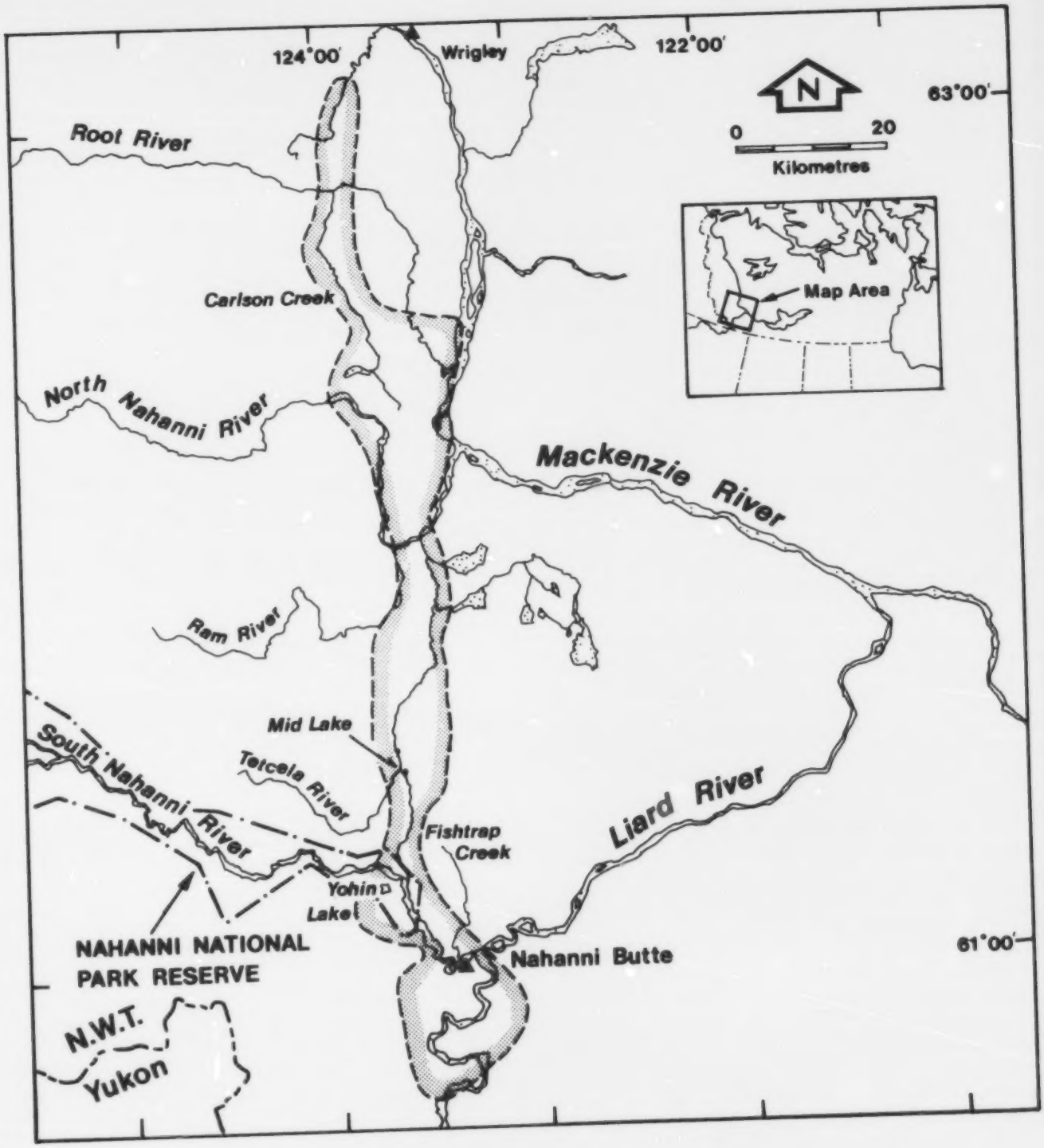
124°00'
Wrigley
122°00'
63°00'
N
0
20
Kilometres
Root River
Map Area
Carlson Creek
North Nahanni River
Mackenzie River
Ram River
Mid Lake
South Nahanni River
Tetcela River
Liard River
Fishtrap Creek
Yohin Lake
NAHANNI NATIONAL PARK RESERVE
Nahanni Butte
61°00'
N.W.T.
Yukon

Site 43: Southeastern Mackenzie Mountains

Location: 61°40′N, 123°30′W **Size: 1976 km²**

Description

This area includes the floodplains that occur between the Nahanni and Camsell ranges along the east edge of the Mackenzie Mountains. River systems in the area include the Liard, South Nahanni, Tetcela, Ram, and Root rivers, and Carlson and Fishtrap creeks.

Coniferous forests are the predominant vegetation; alpine tundra is common at the higher altitudes. Important habitats adjacent to the above rivers include oxbow lakes, ponds, and pond complexes. Yohin Lake and Mid Lake are also important. All wetlands are characterized by extensive emergent vegetation along portions or all of their margins. Typical emergent species include cattail, bogrush, horsetail, and waterlily.

Biological value

Approximately 15% of the Canadian population of Trumpeter Swans nests in the wetlands adjacent to the rivers, creeks, and lakes of this area. The numbers of adults (pairs) observed in the area from 1986 to 1988 were 65(26), 78(34), and 73(28), respectively (Shandruk and McCormick 1989). A few pairs also nest along the Nahanni River northwest of this area and likely along other rivers not yet surveyed (McCormick and Shandruk 1987). The nesting swans likely arrive in early June and depart by the end of September.

The Trumpeter Swan is a rare species in Canada (MacKay 1978).

Dall's sheep are found in some of the alpine tundra areas, and moose and woodland caribou frequent lower elevations along the river. Grizzly and black bears also inhabit the area (Cairns et al. 1978).

Sensitivities

Breeding swans are vulnerable to disturbance, and their lowland habitat is sensitive to terrain disturbance.

Potential conflicts

Mineral exploration and extraction in the area could be a source of disturbance and terrain degradation.

Status of the Key Habitat Site

A small part of this site occurs within Nahanni National Park Reserve.

References

Anonymous. 1983. Nahanni National Park resources; description and evaluation. Unpubl. rep., Parks Canada, Winnipeg.

Cairns, A.L.; Henry, J.D.; Scotter, G.W. 1978. Vegetation, wildlife, and recreation assessment of the Flat–South Nahanni rivers confluence area, Nahanni National Park. Unpubl. rep., Can. Wildl. Serv., Edmonton. 259 pp.

MacKay, R.H. 1978. Status report on Trumpeter Swan, *Olor buccinator*, in Canada, 1978. Comm. Status Endangered Wildl. Can., Ottawa. 38 pp.

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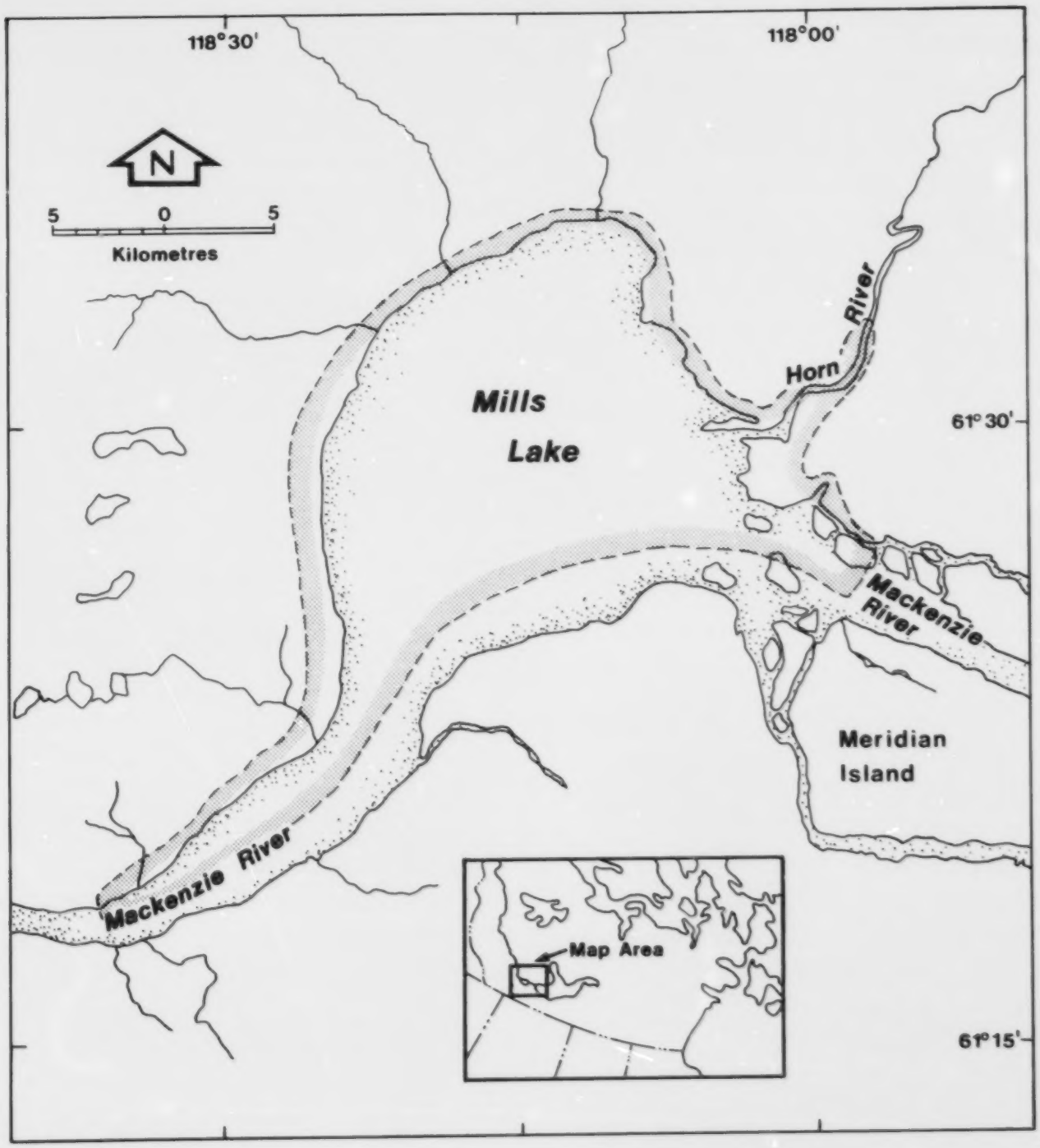
118°30'
118°00'
N
5 0 5
Kilometres
Horn River
Mills Lake
61°30'
Mackenzie River
Meridian Island
Mackenzie River
Map Area
61°15'

Site 44: Mills Lake

Location: 61°25′N, 118°15′W **Size:** 393 km²

Description

Mills Lake is a large widening of the Mackenzie River at the confluence of the Horn River. Upper Devonian shales and limestones underlie surficial deposits. Soils in this area are the result of poorly drained till and glaciolacustrine deposits. They are predominantly luvisols. Well-developed emergent and aquatic vegetation communities and floating sedge mats are a major feature of the lake. Sandbars and low-lying areas occur adjacent to the lake.

Biological value

Thousands of waterfowl stage at this lake during fall migration. The emergent sedge zone on the north shore, the marsh on the Horn River delta, and the area near Meridian Island are most frequently used as resting and feeding sites. Peak numbers per day between 14 and 26 September 1972 included 9860 Greater White-fronted Geese, 2190 Tundra Swans, nearly 4000 Lesser Snow Geese, 1390 Canada Geese, and approximately 27 000 ducks (mostly American Widgeon, Northern Pintail, Mallard, and Canvasback) (Salter 1974). There is a need to update these observations, as the continental populations of several species have changed considerably in the last 20 years. In some years, several thousand American Coots feed among the *Potamogeton* on Mills Lake (S. Alexander, pers. obs.). These numbers represent approximately 8% of the western mid-continent Greater White-fronted Geese and 2% of the Tundra Swans in Canada. These data do not take into account any turnover of birds; therefore, the actual number of birds staging at Mills Lake was probably considerably higher than reported here. Most geese are present from early to late September; ducks may remain in the area until mid-October. Fewer numbers of most species stage on the lake during spring migration (Salter et al. 1974).

Sensitivities

Staging waterfowl are sensitive to disturbance. Pollution of the lake water or alteration of its levels could result in degradation of aquatic and shoreline habitat.

Potential conflicts

Increased haying or grazing of marsh communities could cause habitat destruction or alteration (Kemper et al. 1975). Dredging of the river channel for improved barge transportation could be a source of disturbance if conducted during migration periods. The proposed Slave River dam may alter water levels in the Mackenzie River.

Status of Key Habitat Site

IBP Site.

References

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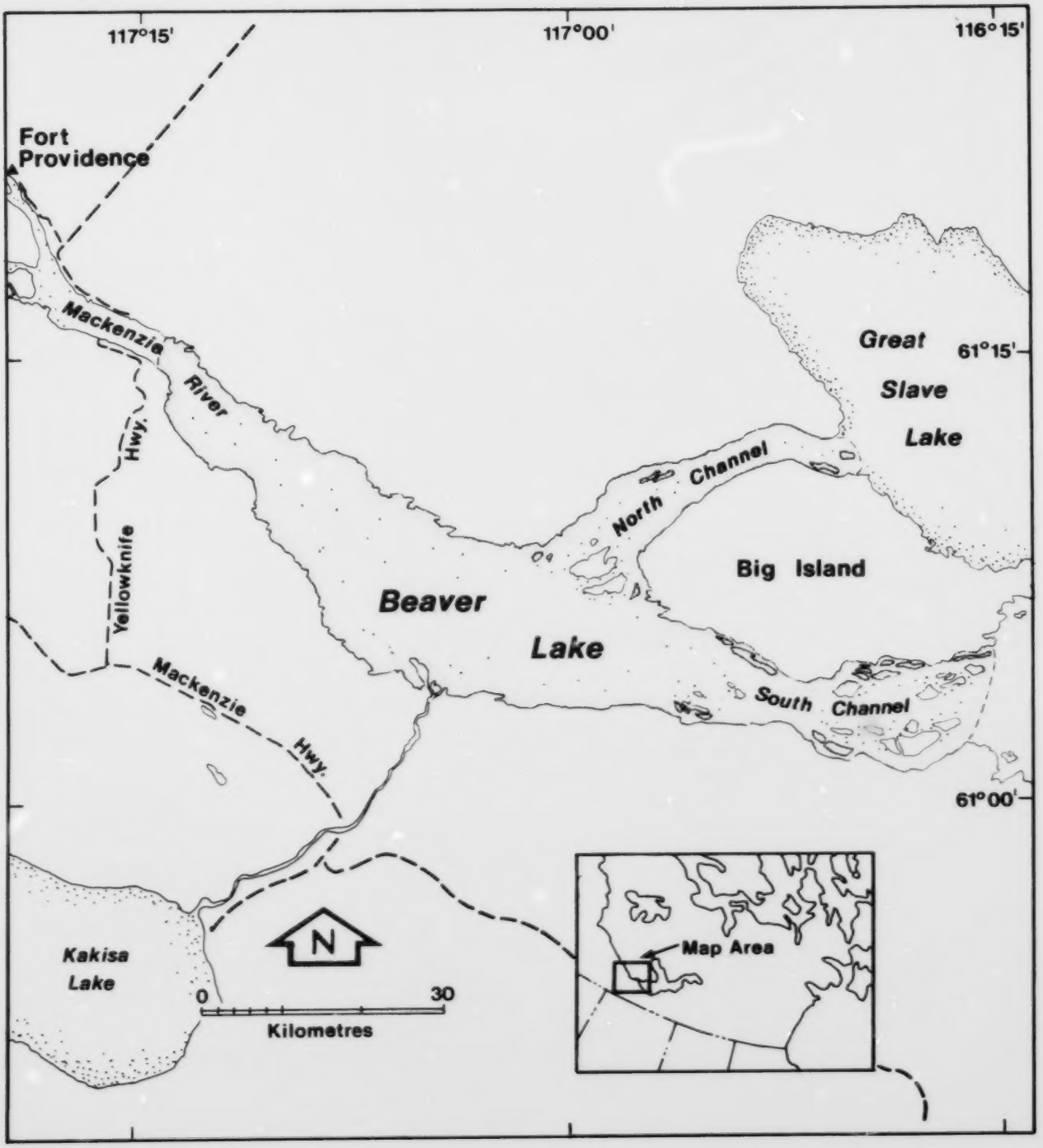
117°15'
117°00'
116°15'
Fort Providence
Mackenzie River
Hwy.
Yellowknife
Mackenzie Hwy.
Great Slave Lake
61°15'
North Channel
Big Island
Beaver Lake
South Channel
61°00'
Kakisa Lake
N
0
30
Kilometres
Map Area

Site 45: Beaver Lake

Location: 61°07′N, 117°08′W **Size: 461 km²**

Description

Beaver Lake is a widening of the Mackenzie River at the outlet of Great Slave Lake. It is approximately 40 km upriver from the settlement of Fort Providence. The surrounding low-lying region is part of the Great Slave Plain and is underlain by Upper Devonian shales and limestone (Douglas 1959).

The north shores of both channels around Big Island are low, with extensive sedge–grass marsh along alluvial flats. The south shores have a narrower margin of marsh before the transition to spruce–poplar forest. The islands at the outlet of the North Channel are low and marshy, whereas those in the South Channel are higher and more forested.

Biological value

The channel islands and the North Channel are favoured resting and feeding sites for migrant Tundra Swans and ducks during spring and fall. In the spring of 1973, peak numbers of 1175 swans and more than 5000 ducks were recorded on a 17 May survey (Salter et al. 1974). More than 10 000 ducks (mostly American Wigeon, scaup, and Mallards) and 4470 Tundra Swans, 3% of the Canadian population, were recorded on 22 September 1972 (Salter 1974). Recent surveys are needed to document the current use of this Key Habitat Site by waterfowl. As many as 8000 Canvasbacks have been observed in the North Channel (T. Barry, pers. commun.).

Waterfowl pass through the area in May and again in September and October.

Sensitivities

Staging waterfowl are sensitive to disturbance. Pollution of the lake water or alteration of its levels could result in degradation of aquatic and shoreline habitat.

Potential conflicts

Dredging of the river channel for improved barge transportation could be a source of disturbance if conducted during migration. The proposed Slave River dam may alter water levels of the Mackenzie River. An overhead crossing of the Mackenzie River near Fort Providence is being considered by the Northwest Territories Power Corporation as part of the Taltson-Snare Intertie Transmission Line Project (Northwest Territories Power Corporation 1990). Transmission lines crossing wetlands frequented by waterfowl are known to cause avian mortalities (Faanes 1987).

Status of Key Habitat Site

No special status.

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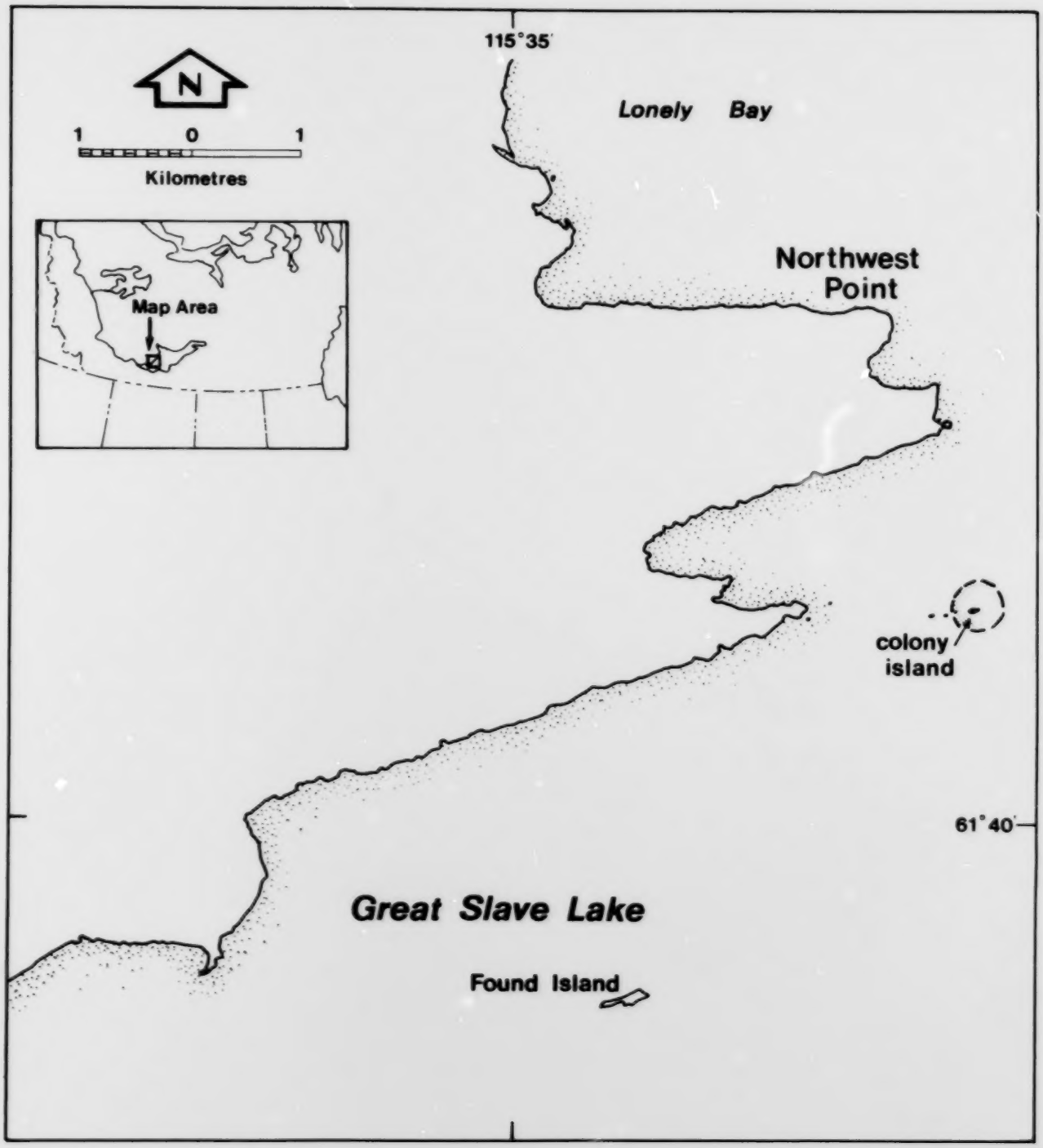
115°35'
N
1 0 1
Kilometres
Map Area
Lonely Bay
Northwest Point
colony island
61°40'
Great Slave Lake
Found Island

Site 46: Northwest Point

Location: 61°43′N, 115°30′W **Size:** 1 km²

Description

This site is a small, exposed islet off Northwest Point on the west shore of Great Slave Lake, approximately 100 km southwest of Yellowknife. The island rises 2–3 m above water level and is composed of boulders, rock rubble, and gravel, with thin soil and sparse vegetation.

Biological value

This islet is the location of the largest known colony of Caspian Terns in the Northwest Territories, comprising 110 tightly packed pairs of nesting birds in 1989 (Sirois et al. 1991). This represents over 1% of the national population, approximately one-third of the known breeding population in the Northwest Territories, and about one-half of the Great Slave Lake population.

Caspian Terns arrive at Great Slave Lake in May and begin incubating eggs in early June. Eggs hatch in early July, and the young birds fledge in mid- to late August (J. Sirois, pers. commun.).

The Caspian Tern is a rare species in Canada (Martin 1978).

Also nesting on the islet in 1989 were 12 pairs of Herring Gulls and 35 pairs of California Gulls. At nearby Found Island, there is a colony of 300 pairs of California Gulls and 70 pairs of Herring Gulls, one of the largest gulleries in Great Slave Lake. Small numbers of Greater Scaup, Red-breasted Mergansers, Mew Gulls, Ring-billed Gulls, and Common Terns also nest on these islands (J. Sirois, pers. commun.).

Sensitivities

Caspian Terns are very sensitive to disturbance during the nesting season, particularly in the early stages from May through June. The presence of so many gulls around the island renders the eggs and young of Caspian Terns highly vulnerable to predation if the adults are disturbed and flushed from their nests by humans. Pollution in Great Slave Lake could be hazardous to terns.

Potential conflicts

The islet is very small and remote and probably rarely visited by people. However, a tourist lodge is operated at Moraine Point (15 km south of the colony), and clients sometimes visit Found Island.

Status of Key Habitat Site

No special status.

References:

Martin, M. 1978. Status report on Caspian Tern *Sterna caspia* in Canada 1978. Rep. prepared for Can. Wildl. Serv./Comm. Status Endangered Wildl. Can., Ottawa. 42 pp.

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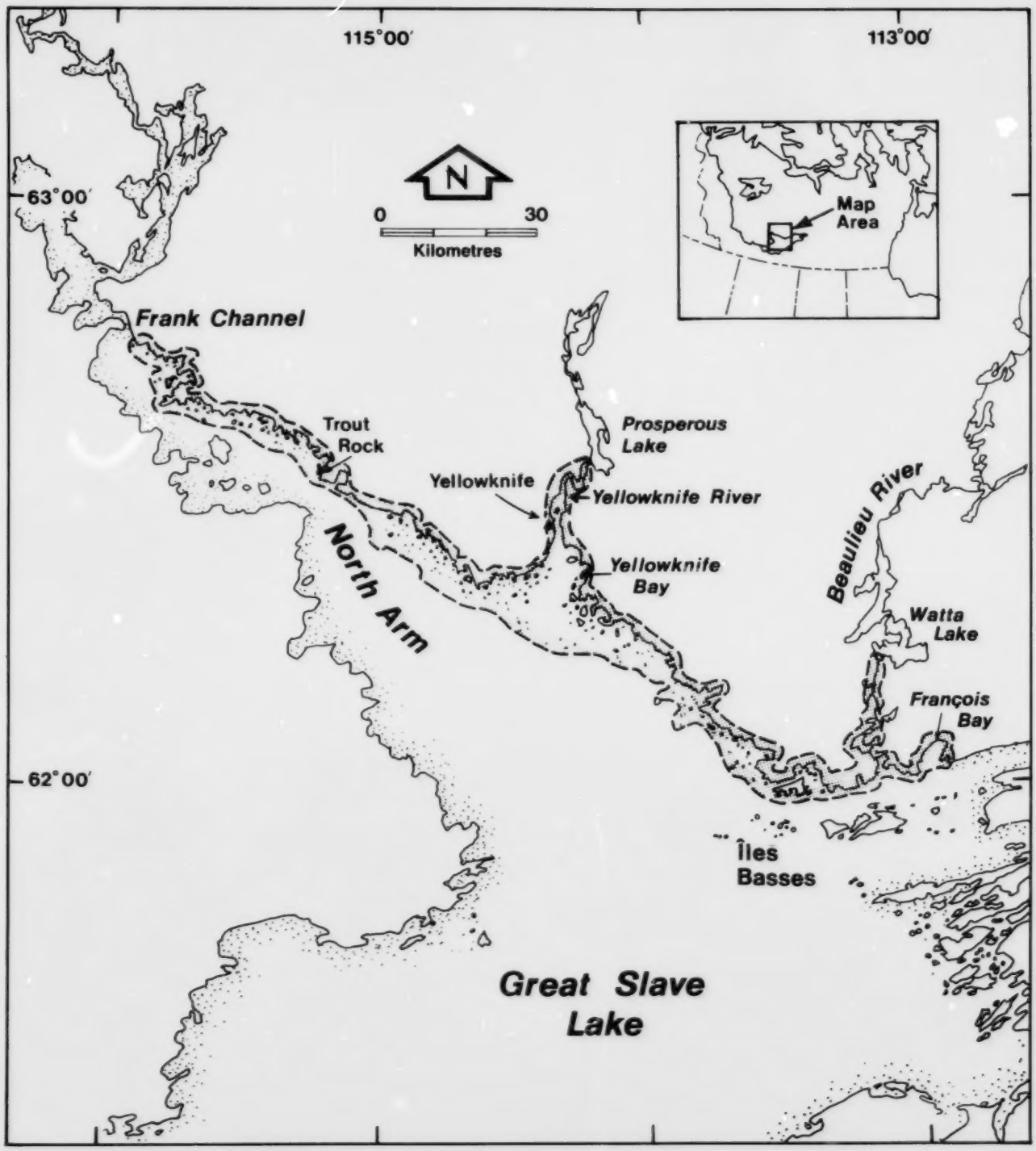
115°00′
113°00′
63°00′
62°00′
N
0
30
Kilometres
Map Area
Frank Channel
Trout Rock
Prosperous Lake
Yellowknife
Yellowknife River
Yellowknife Bay
North Arm
Beaulieu River
Watta Lake
François Bay
Îles Basses
Great Slave Lake

Site 47: North Arm, Great Slave Lake

Location: 62°19′N, 114°23′W **Size: 1129 km²**

Description

This site comprises the myriad islands, numerous shallow bays, and extensive wetlands along the north shore of the North Arm of Great Slave Lake, between Frank Channel and François Bay. It also includes the Beaulieu River north to Watta Lake and the Yellowknife River upstream to Prosperous Lake.

The North Arm is the interface of the Precambrian Shield and the Interior Plains (Bostock 1970). This area belongs to the Precambrian Edge: a narrow strip extending along the western edge of the Precambrian Shield from Great Bear Lake to Lake Athabasca. The Precambrian Edge provides better-than-average northern boreal forest waterfowl habitat and has a substantially greater breeding duck density than either the Precambrian open forest to the northeast or the closed forest of the Mackenzie Lowlands (Interior Plains) to the southwest (Murdy 1964).

Biological value

The North Arm is important to migrating water birds during spring migration, especially in late springs when open water is limited. During two late springs (1988 and 1990), tens of thousands of birds concentrated in the North Arm's shallow bays and adjacent wetlands (J. Sirois, unpubl. data), which are ice-free earlier than other water bodies (Sirois and Cameron 1989). On 21–22 May 1990, when strong north winds temporarily halted their northward migration, more than 100 000 water birds (representing 29 species) were estimated in the North Arm, including 20 500 Canada Geese, 12 000 Lesser and Greater scaup, 5700 Northern Pintail, 2050 Tundra Swans, and 1280 Surf Scoters (J. Sirois, unpubl. data).

Tundra Swans consistently use the North Arm during spring migration. Aerial surveys in May recorded peak numbers of 584 swans in 1986, 1382 in 1987, 1653 in 1988, and 2050 in 1990 (over 1% of the national population) (Sirois 1987; Sirois and McCormick 1987; Sirois and Cameron 1989). Turnover of birds has not been taken into account; therefore, the number of swans using the area is likely higher than indicated.

The islands of the North Arm provide nesting habitat for 1% of the national population of Caspian Terns (27% of the population in the Northwest Territories). In 1986 and 1987, 77 pairs were found between Frank Channel and Îles Basses, 49 of which nested at one colony near Trout Rock (McCormick and Sirois 1988; Sirois et al. 1989). The Caspian Tern is a rare bird in Canada (Martin 1978).

Approximately 1300 pairs of gulls (Herring, California, Ring-billed, Mew, and Bonaparte's) and 700 pairs of terns (Arctic and Common) were recorded at the site in 1986 and 1987 (McCormick and Sirois 1988; Sirois et al. 1989). Many of these species are at or near the northern limit of their breeding ranges. Recently, Black Terns have been confirmed as a nesting species in marsh habitat near Trout Rock (J. Sirois, unpubl. data). In August 1989, over 300 juvenile Black Terns were observed between Yellowknife Bay and Frank Channel, suggesting the presence of many nesting pairs in this area.

Sensitivities

Staging waterfowl and nesting terns and gulls are sensitive to disturbance and pollution of aquatic habitats.

Potential conflicts

Use of the southwest portion of the site by recreational boaters may cause disturbance to nesting terns and gulls. Litter associated with boaters and commercial fishermen, particularly plastics and abandoned fishing lines and nets, could prove hazardous to water birds.

Status of Key Habitat Site

The West Mirage Islands IBP Site occurs within this Key Habitat Site.

References

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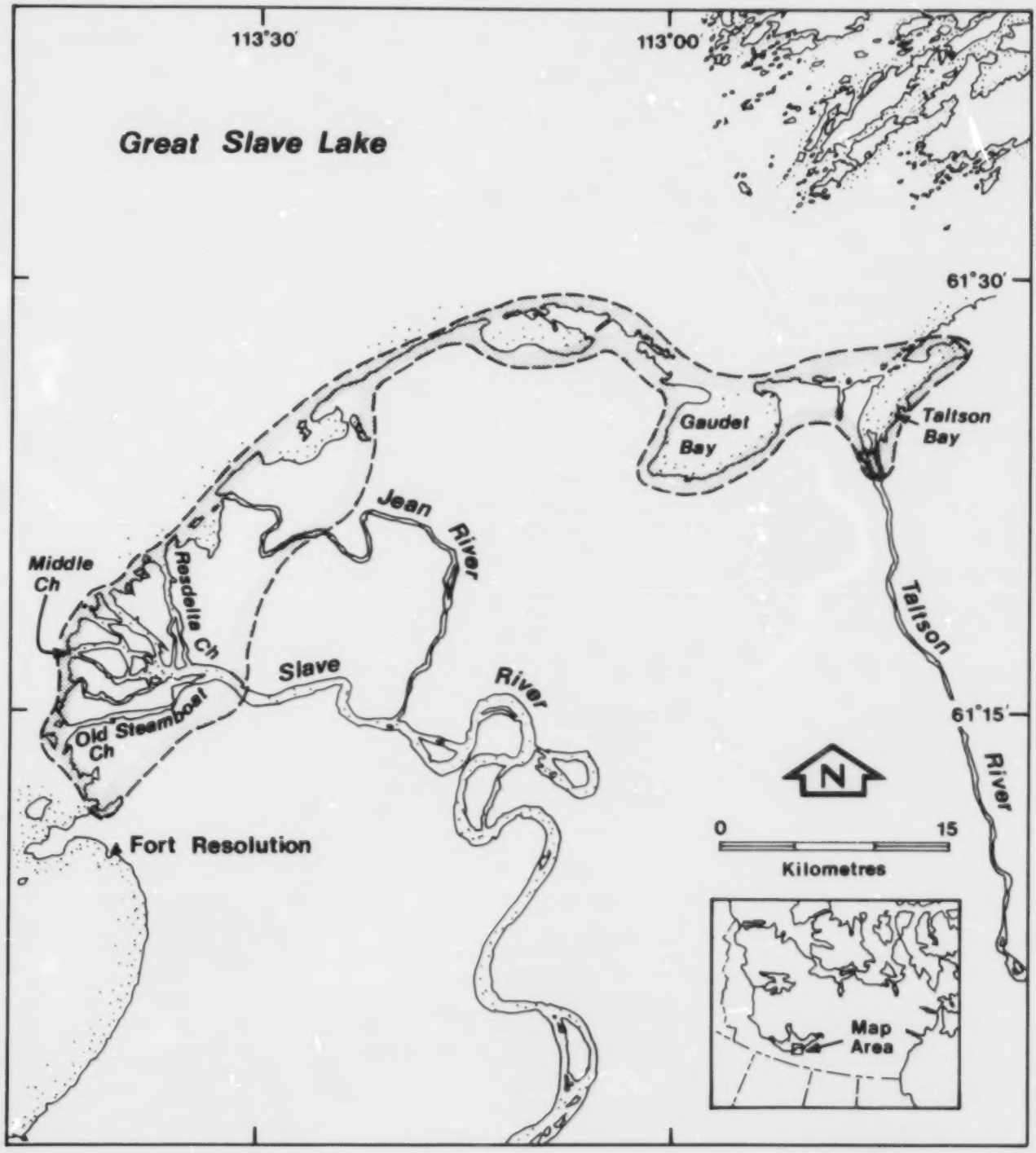
113°30′
113°00′
Great Slave Lake
61°30′
Gaudet Bay
Taltson Bay
Jean River
Middle Ch
Resdelta Ch
Slave River
Old Steamboat Ch
Taltson River
61°15′
Fort Resolution
N
0
15
Kilometres
Map Area

Site 48: Slave River Delta

Location: 61°15′N, 113°40′W **Size:** 425 km²

Description

This area includes the south shore of Great Slave Lake from the Slave River delta to the Taltson River. The area is characterized by extensive alluvial deposits and braided channels. There are several shallow bays between the Slave and Taltson rivers.

Much of the vegetation in the outer Slave delta is early-successional, consisting of horsetails and sedges, and is maintained by natural flooding and sedimentation. On less frequently flooded areas, willow species predominate, whereas balsam poplar and spruce grow on drier ground.

Biological value

Shoreline wetlands from the Slave River to the Taltson River provide habitat for thousands of staging water birds in spring and fall. Tundra Swans, Canada Geese, and a variety of duck species are the most abundant migrants. Shorebirds and passerines are also abundant, but the data are spare and inconclusive.

Spring migration data are available from 1979 and 1983 (entire area: Thompson et al. 1979; H.L. Dickson, pers. commun.) and 1984 (Slave delta: Environmental Management Associates 1984). Migration occurs from early May to early June, dependent on weather and ice breakup. On 25 May 1979, 21 000 waterfowl were seen: 5400 Tundra Swans, 10 260 geese, and 5320 ducks (uncorrected for visibility bias). On 25 May 1983, 73 200 waterfowl were seen: 4200 Tundra Swans, 34 560 dark geese, 23 520 white geese (presumably Snow Geese), and 10 900 ducks. In both years, over 81% of the birds were east of the Slave delta. These values represent up to 4%, 8%, and 1% of the Tundra Swans, Canada Geese (*parvipes* and *hutchinsii*; Bellrose 1980), and Lesser Snow Geese in Canada, respectively.

Fall migration data are available from 1979 (entire area: Thompson et al. 1979) and from 1980, 1983, and 1984 (Slave delta: McCourt Management Ltd. 1982; Environmental Management Associates 1985). Migration occurs from early August to mid-October. On 16 September 1979, 17 080 waterfowl were seen (55% east of the Slave delta): 7700 Tundra Swans (80% east of the delta), 4370 dark geese (mostly Canada Geese), 350 Snow Geese, and 4660 ducks. Similar numbers were seen for the Slave delta in 1980, but fewer birds were seen in 1983 and 1984. These values represent up to 5% and 1% of Tundra Swans and Canada Geese, respectively, in Canada. Shorebirds are among the earliest but least-known migrants (Environmental Management Associates 1985); in 1979, more than 3000 were seen in the Slave delta on 11 September, but surveys were not conducted in early August.

Delta wetlands are also important to nesting birds. In 1978, about 5200 pairs of ducks (mostly Lesser Scaup, Mallard, American Wigeon, Bufflehead, Blue-winged Teal) bred on the Slave delta, a low year according to people from Fort Resolution (Thompson et al. 1979). In years of prairie drought, the delta and vicinity likely harbour many more pairs of breeding ducks. Geese and swans use wet meadows in the outer delta and along the shoreline and silt bars of inner channels. Ducks use a variety of habitats in the inner and outer deltas.

Moose, muskrat, and beaver are common in this area.

Sensitivities

Waterfowl are sensitive to disturbance and pollution. Delta habitats are susceptible to degradation through alteration of the water regime: deltas are dependent on an influx of sediments, and the maintenance of early-succession plant species and suspended ponds is dependent on spring flooding.

Potential conflicts

Dams on the Peace River in British Columbia have reduced annual water-level fluctuations in Great Slave Lake (Environment Canada, unpubl. data), but the effect on habitat in this area is not known. Slave River hydro development (McCourt Management Ltd. 1982) could further reduce flooding in the delta, which could cause the drying of productive marshes and ponds, replacing waterfowl food plants with unpalatable shrubs and generally reducing the quality of bird habitat in the area (Hardy Associates Ltd. 1982).

Effluent from proposed pulp mills on the Peace and Athabasca rivers could affect the health of the entire delta.

Status of Key Habitat Site

No special status.

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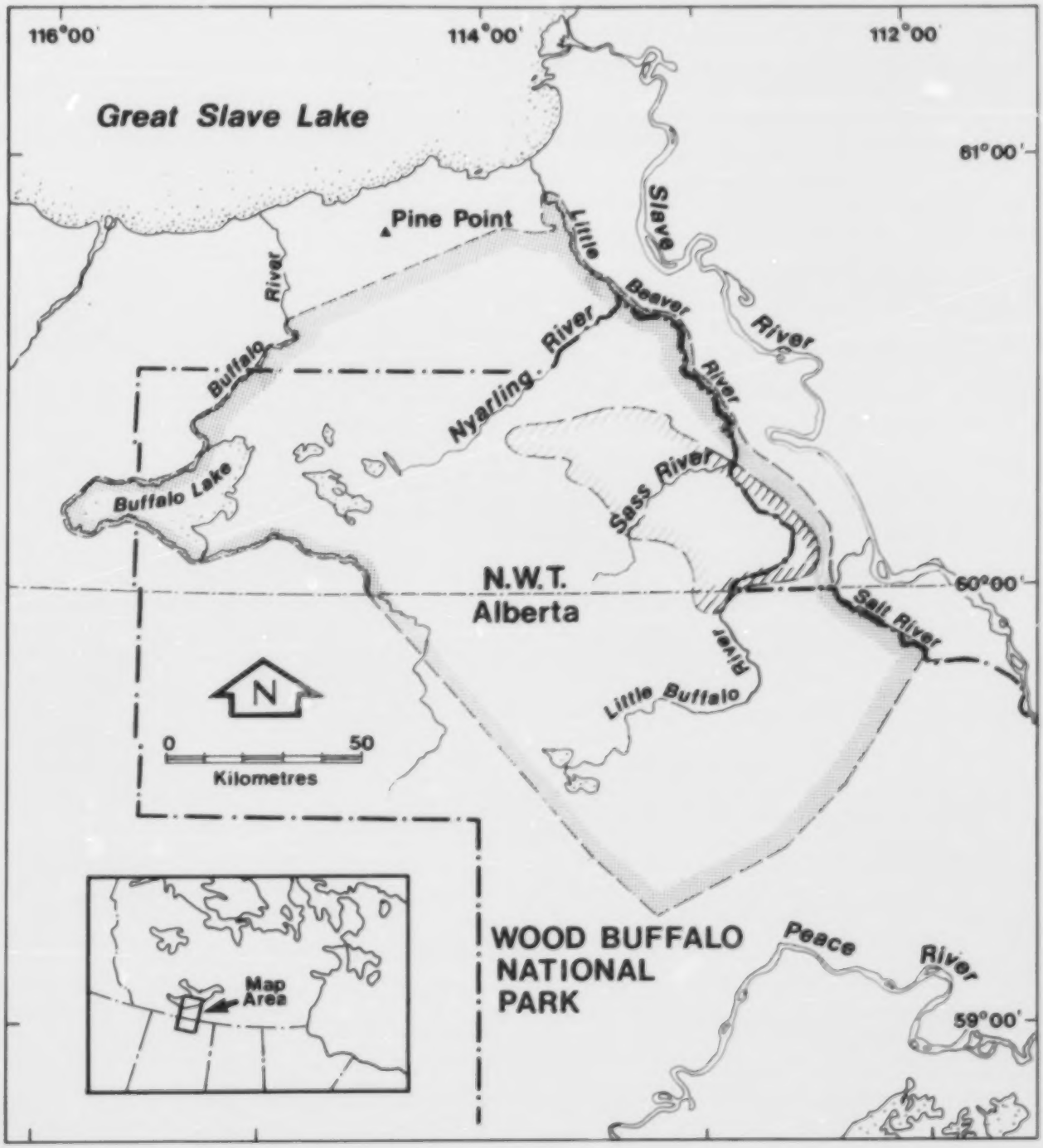
116°00'
114°00'
112°00'
61°00'
60°00'
59°00'
Great Slave Lake
Pine Point
Slave River
Little Buffalo River
Buffalo River
Nyarling River
Beaver River
Sass River
Buffalo Lake
N.W.T.
Alberta
Salt River
Little Buffalo River
N
0
50
Kilometres
Map Area
WOOD BUFFALO NATIONAL PARK
Peace River

Site 49: Sass and Nyarling Rivers

Location: 60°20'N, 113°15'W **Size: 18 060 km²**

Description

The northeastern boundary of the site lies approximately 2.5 km south of the abandoned community of Pine Point.

The area is a complex of marshes, shallow ponds, streams, lakes, and bogs occurring near the northern extent of the Boreal Forest Region and west of the Canadian Shield. Grass–sedge meadows, black spruce–tamarack woods, and small areas of muskeg are common. A shallow overburden of till covers limestone bedrock. Part of the site lies within the Salt River alkali flats. The flats are sparsely vegetated, and plants with saline affinities are found on deposits of salt left by outwash from brine springs. Sinkholes and other features of karst topography are common.

Biological value

This is the only known breeding locality of the endangered Whooping Crane. In 1983, 23 breeding pairs and a total of 70 birds occupied the area. In 1989, the spring flight consisted of 131 birds, and 30 pairs nested in the area (E. Kuyt, pers. commun.). Preferred nesting habitat is on shallow ponds and lakes where the dominant emergent vegetation is bulrush, sedge, and cattail (Kuyt 1981). Whooping Cranes arrive at their breeding grounds about the last week of April and leave towards the end of September.

Waterfowl use lakes in the area as fall staging sites. More than 2400 Canada Geese and lesser numbers of Tundra Swans and Greater White-fronted Geese were observed on a partial survey of Buffalo Lake on 16 September 1972 (Salter 1974).

Peregrine Falcons occur in the area.

The salt flats are a preferred winter range of wood bison; the upland prairies are utilized in the summer.

Sensitivities

Disruption or alteration of drainage patterns in the nesting area could cause the drying of shallow nesting ponds. Increased ground traffic and low-level aircraft would also disturb the nesting birds. (Park regulations restrict ground access to nesting sites between 15 April and 31 October.)

Potential conflicts

Construction of a hydroelectric dam across the Slave River near Fort Smith has been proposed (McCourt Management Ltd. 1982). Any increase in industrial activities could augment existing hazards. Potential threats include the development of transmission corridors (with power lines and transmission towers), increased traffic along the highway that runs through the nesting site, and lowered water levels in nesting ponds.

Status of Key Habitat Site

Wetland of International Importance; IBP Site; most of the Key Habitat Site lies within Wood Buffalo National Park.

References

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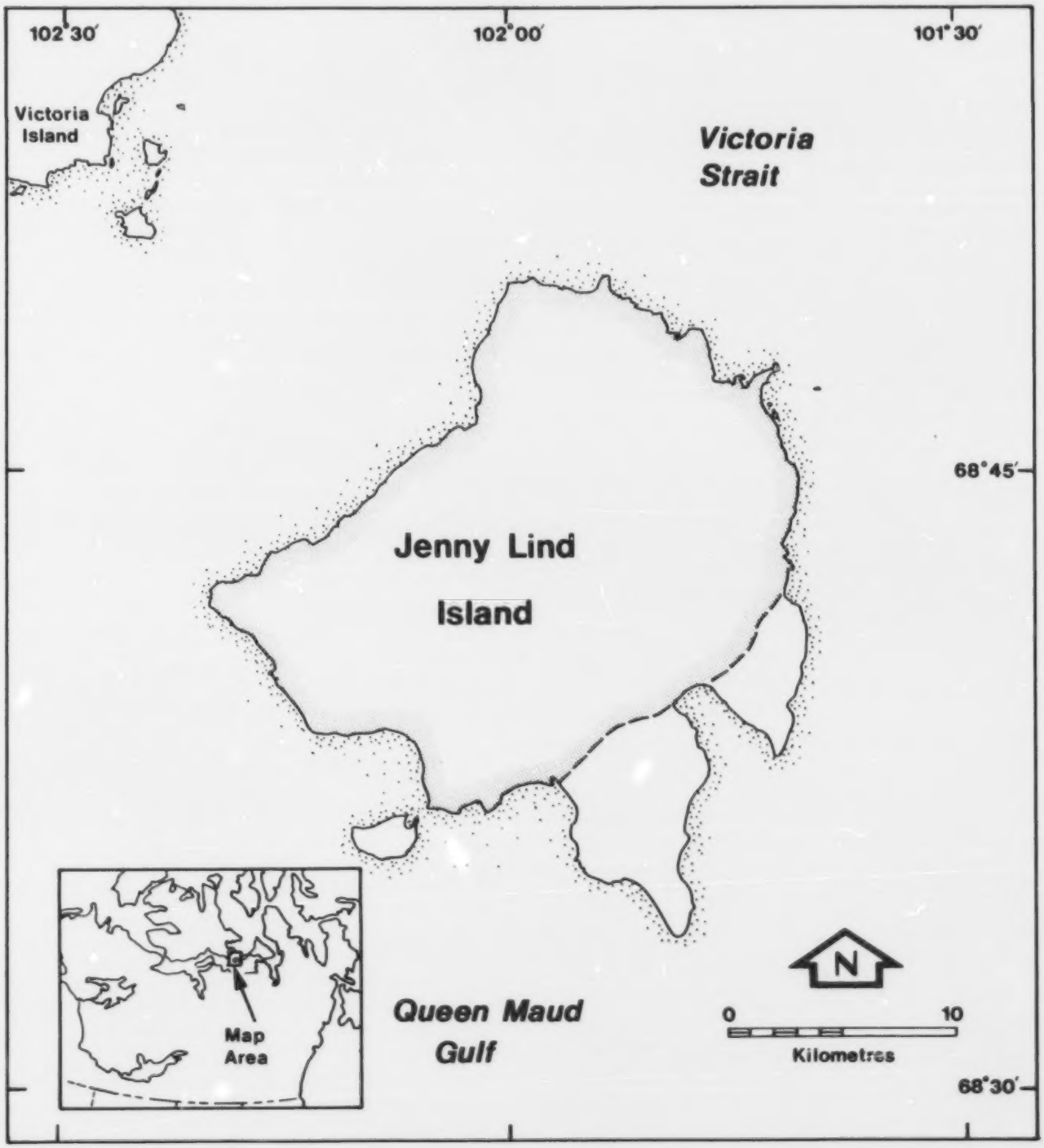
Site 50: Jenny Lind Island



Site 50: Jenny Lind Island

Location: 68°43′N, 101°58′W **Size: 355 km²**

Description

Jenny Lind Island, bordered by Queen Maud Gulf to the south and Victoria Strait to the north, lies approximately 20 km off the southeast corner of Victoria Island. The community of Cambridge Bay is located 120 km to the northwest.

The island lies within the Victoria Lowland Division of the Arctic Lowlands Physiographic Region (Bostock 1970). This region was subject to complete marine inundation during the last glacial period (Prest et al. 1966). It has low, undulating to flat relief, with several rocky and sparsely vegetated ridges having a maximum elevation of 80 m. Most of the coastline is sandy with scattered rocks.

Biological value

In June 1988, approximately 33 000 Lesser Snow Geese were found nesting on Jenny Lind Island (R. Kerbes, pers. commun.). This represents 2% of the national breeding population. In 1985, an estimated 50 000 Lesser Snow Geese nested on Jenny Lind Island (McCormick and Poston 1986).

The Snow Geese nest over most of the island, excluding the southeast corner, which consists primarily of sand, gravel, and little vegetation. The main concentration of birds is in the central low-lying portions, which contain numerous wetlands and extensive sedge meadows (McCormick and Poston 1986).

In 1988, an estimated 900 Ross' Geese were also observed nesting on the island (R. Kerbes, pers. commun.). Ross' Geese could not be identified during the 1985 aerial surveys (McCormick and Poston 1986).

In 1985, an estimated 1500 Canada Geese (subspecies *hutchinsii*) were found scattered over most of the island, except for the southeast and northern parts of the island. The majority of these were moulting and nonbreeding birds (McCormick and Poston 1986).

Jenny Lind Island also supports a diverse assemblage of breeding shorebirds (Parmelee et al. 1967).

A herd of six muskoxen, including an adult cow with a calf, was observed at the south end of the island in 1985. This is the first record indicating that muskoxen may be breeding on the island (McCormick and Poston 1986). The only other recent sighting was of a dead cow during the winter of 1984–85 in the vicinity of the Distant Early Warning (DEW) station on the island's southeast end (A. Gunn, pers. commun.).

Sensitivities

Nesting, staging, and moulting waterfowl are sensitive to disturbance and the degradation of low-lying habitats.

Potential conflicts

None.

Status of Key Habitat Site

No special status.

References

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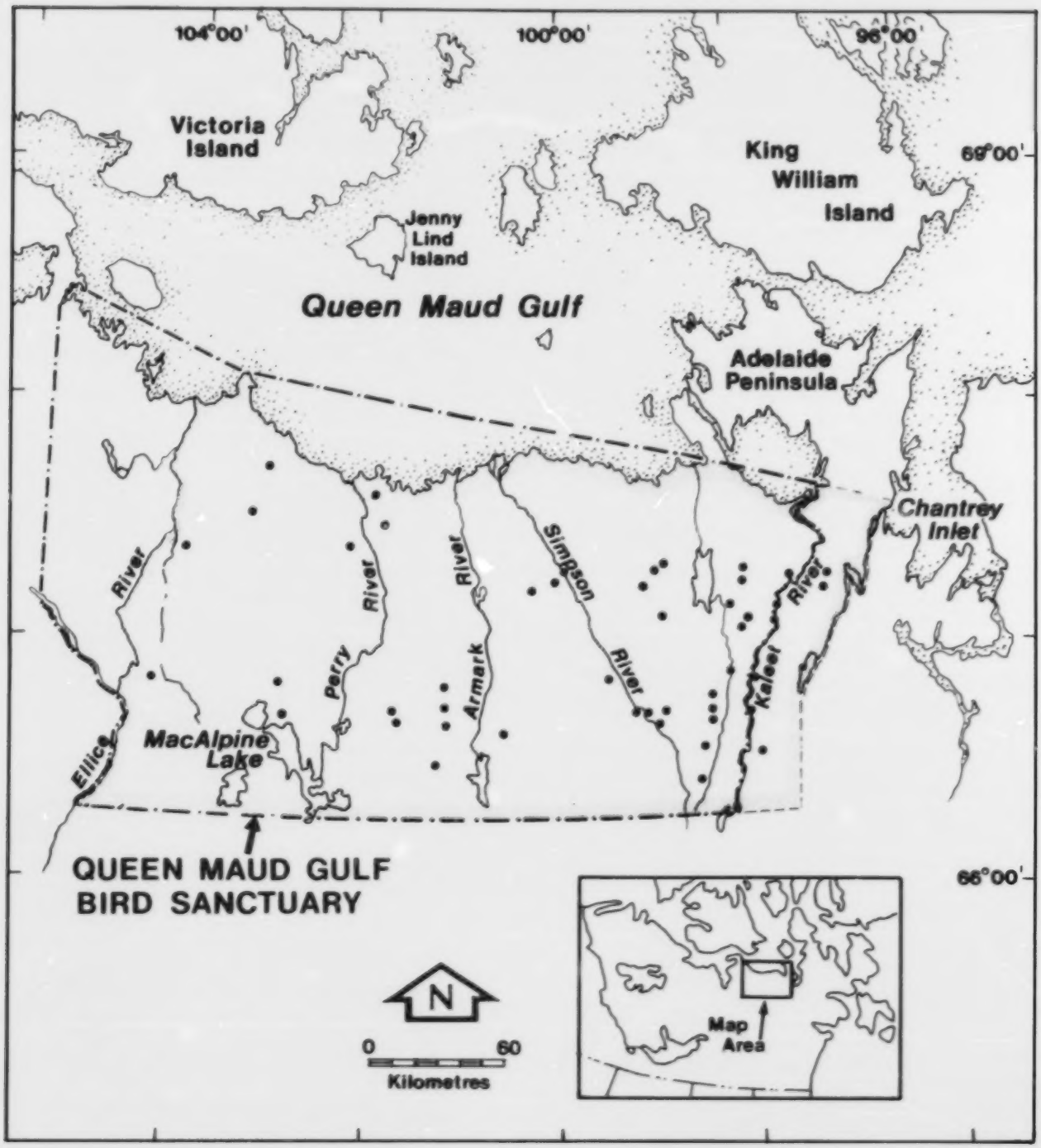
104°00'
100°00'
96°00'
69°00'
66°00'
Victoria Island
King William Island
Jenny Lind Island
Queen Maud Gulf
Adelaide Peninsula
Chantrey Inlet
Ellice River
MacAlpine Lake
Perry River
Armark River
Simpson River
Kaleel River
QUEEN MAUD GULF BIRD SANCTUARY
N
0
60
Kilometres
Map Area

Site 51: Queen Maud Gulf

Location: 67°00′N, 100°30′W **Size: 53 925 km²**

Description

The northern border of this site is bounded by Queen Maud Gulf and is situated approximately 75 km south of the community of Cambridge Bay. The landscape is dominated by a generally flat plain of postglacial marine emergence, which extends approximately 135 km inland from the coast. The lowland consists of Precambrian bedrock overlain with glacial till and marine clays and silts. Relief is provided by rock outcrops, drumlins, and old beach ridges, which are most evident in the southern and western regions of the lowlands.

The vegetation consists of wet sedge meadows and marsh tundra in low-lying areas, interspersed with upland plant communities of lichen–moss–vascular plant associations (Ryder 1969).

Biological value

There are about 60 goose colonies in this area, most of which are scattered throughout the Queen Maud Gulf Bird Sanctuary. A few are outside the sanctuary but within 15 km of its eastern boundary. In 1982, an estimated 45 350 pairs of Ross' Geese nested in association with approximately 53 000 pairs of Lesser Snow Geese. By 1988, the numbers had increased considerably to 88 800 pairs of Ross' Geese and 137 300 pairs of Lesser Snow Geese (R. Kerbes, pers. commun.). The 1988 totals represent about 99% of the world's population of Ross' Geese and approximately 15% of the Canadian population of Lesser Snow Geese.

The area is also heavily used by other waterfowl. Unstratified aerial surveys in June 1990 (approximately 6% coverage of a 23 420-km² area in the northern half of the bird sanctuary) yielded preliminary estimates of 65 100 Greater White-fronted Geese, 49 600 Canada Geese, 15 500 Northern Pintail, 12 600 Oldsquaw, 11 500 Tundra Swans, 11 000 King Eiders, 10 300 Sandhill Cranes, 1900 Brant, and 1100 Common Eiders (R. Alisauskas, pers. commun.).

The Ellice River is an important moulting area for large Canada Geese (*maxima* and *moffitti*); in 1986, about 8500 birds, or 2% of the national population, moulted along the river (McCormick and Bromley 1990; cf. Alexander 1990).

Geese arrive in late May. Brood rearing and moulting occur throughout the area, and geese begin leaving during the last week of August.

The Queen Maud Gulf lowlands are among the most extensive wetlands in the mid-Arctic. Like the Rasmussen Lowlands (see Key Habitat Site 55), they likely harbour hundreds of thousands of shorebirds, such as Pectoral Sandpipers, Semipalmated Sandpipers, and Lesser Golden-Plovers.

The Bathurst caribou calving grounds are located both west of the Ellice River and east towards the Perry River. More than 6000 muskoxen are estimated to be present within the boundaries of the bird sanctuary (Urquhart 1982).

Ringed seals are the most abundant marine mammal found in offshore waters.

Sensitivities

Moulting and nesting geese are sensitive to disturbance. Low-lying habitats are sensitive to terrain disturbance.

Potential conflicts

None.

Status of Key Habitat Site

Queen Maud Gulf Bird Sanctuary; Wetland of International Importance; IBP Site.

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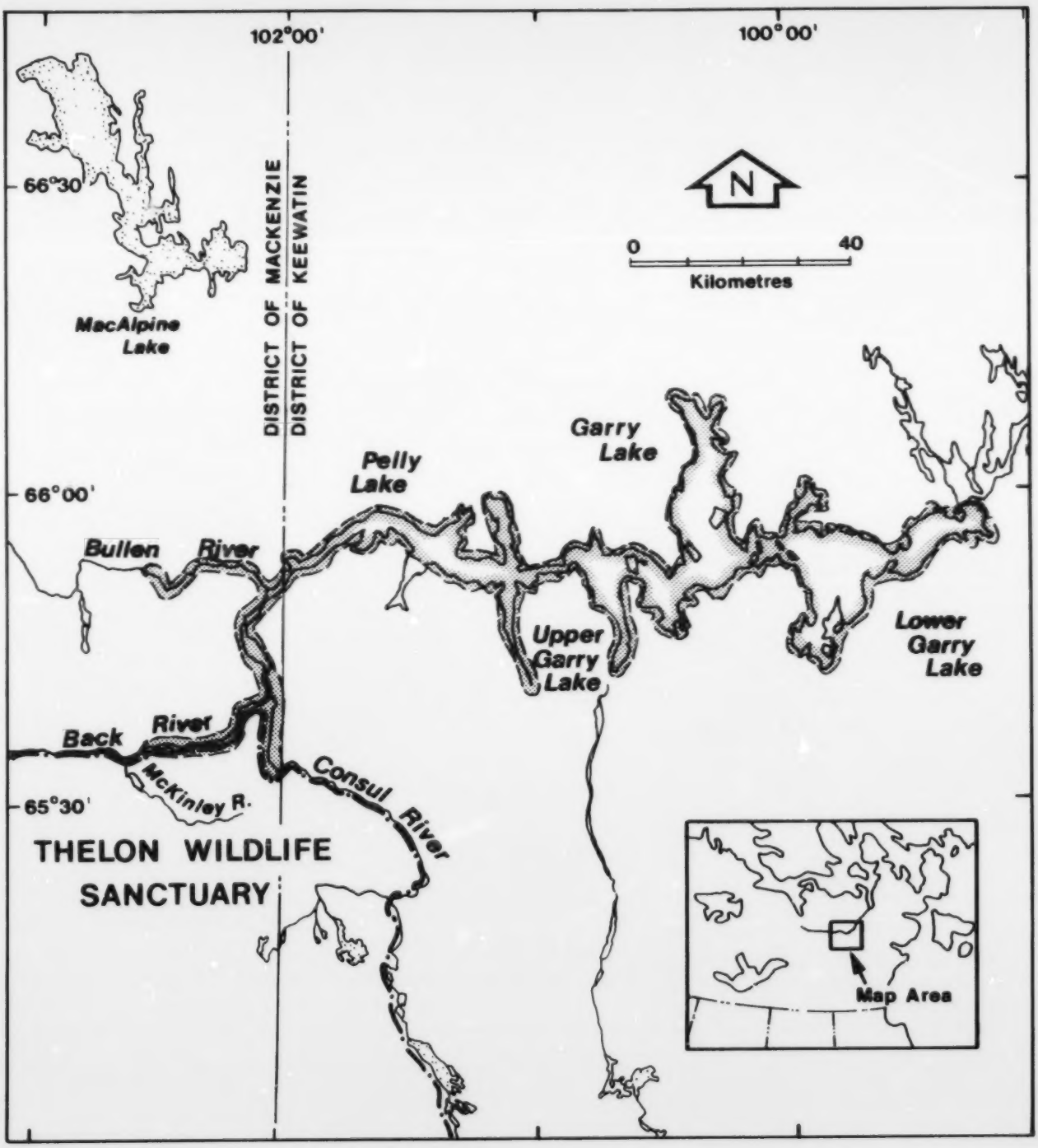
102°00'
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DISTRICT OF MACKENZIE
DISTRICT OF KEEWATIN
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Kilometres
MacAlpine Lake
Pelly Lake
Garry Lake
Bullen River
Upper Garry Lake
Lower Garry Lake
Back River
McKinley R.
Consul River
THELON WILDLIFE SANCTUARY
Map Area

Site 52: Middle Back River

Location: 65°55′N, 100°20′W **Size: 1514 km²**

Description

This site encompasses the Back River, from a point 10 km west of the McKinley River downstream 70 km to the west end of Pelly Lake. It also includes all northern and southern bays of Pelly Lake, Upper Garry Lake, Garry Lake, and Lower Garry Lake to 99°W. The site is situated approximately 240 km northwest of the settlement of Baker Lake.

Pleistocene glacial features are evident in this area of low relief (Wright 1967). Drumlins with continuous and discontinuous eskers, which are oriented in a north–south direction, are common. Silt, sand, and gravel predominate along the river–lake system. The underlying bedrock is of Proterozoic origin, consisting mainly of granitic and allied rocks (Wright 1967).

Wet sedge–graminoid meadows occur along stream and lake banks (Sterling and Dzubin 1967).

Biological value

In the 1960s, this site supported up to 3000 moulting large Canada Geese (subspecies *maxima* and *moffitti*) (Sterling and Dzubin 1967). In 1984 and 1986, respectively, an estimated 9800 and 32 300 Canada Geese moulted in the area (McCormick and Arner 1986; McCormick and Bromley 1990, using estimation procedure in Alexander 1990). The higher value represents about 8% of the continental population of large Canada Geese. This group of moulting birds is thought to be from the Pacific Flyway.

Premoulting flocks generally arrive about mid-June. By mid-August, the geese have regained their ability to fly and begin to leave the area (Kuyt 1966; Sterling and Dzubin 1967).

The geese feed on the sedge–graminoid meadows and use the waters of the streams and rivers as retreats during the moulting period (Sterling and Dzubin 1967).

There are several small colonies of nesting Lesser Snow Geese in the Pelly Lake area. Numbers of adults (breeders and nonbreeders) increased from about 360 in 1984 to between 2200 and 2600 in 1986, and to over 9000 in 1987 (one of the larger colonies found in 1986 was not surveyed in 1987) (McCormick 1988). The increase was attributed to late spring snow conditions at Queen Maud Gulf nesting colonies. In 1988, 8000 to 8300 Snow Geese were counted, even though there was a more typical spring farther north (McCormick 1989).

The calving grounds for the Beverly caribou herd lie along the southern boundary of this area.

Sensitivities

Moulting geese are sensitive to disturbance.

Potential conflicts

Some mineral exploration occurs in the vicinity.

Status of Key Habitat Site

The western part of the Key Habitat Site borders the Thelon Wildlife Sanctuary.

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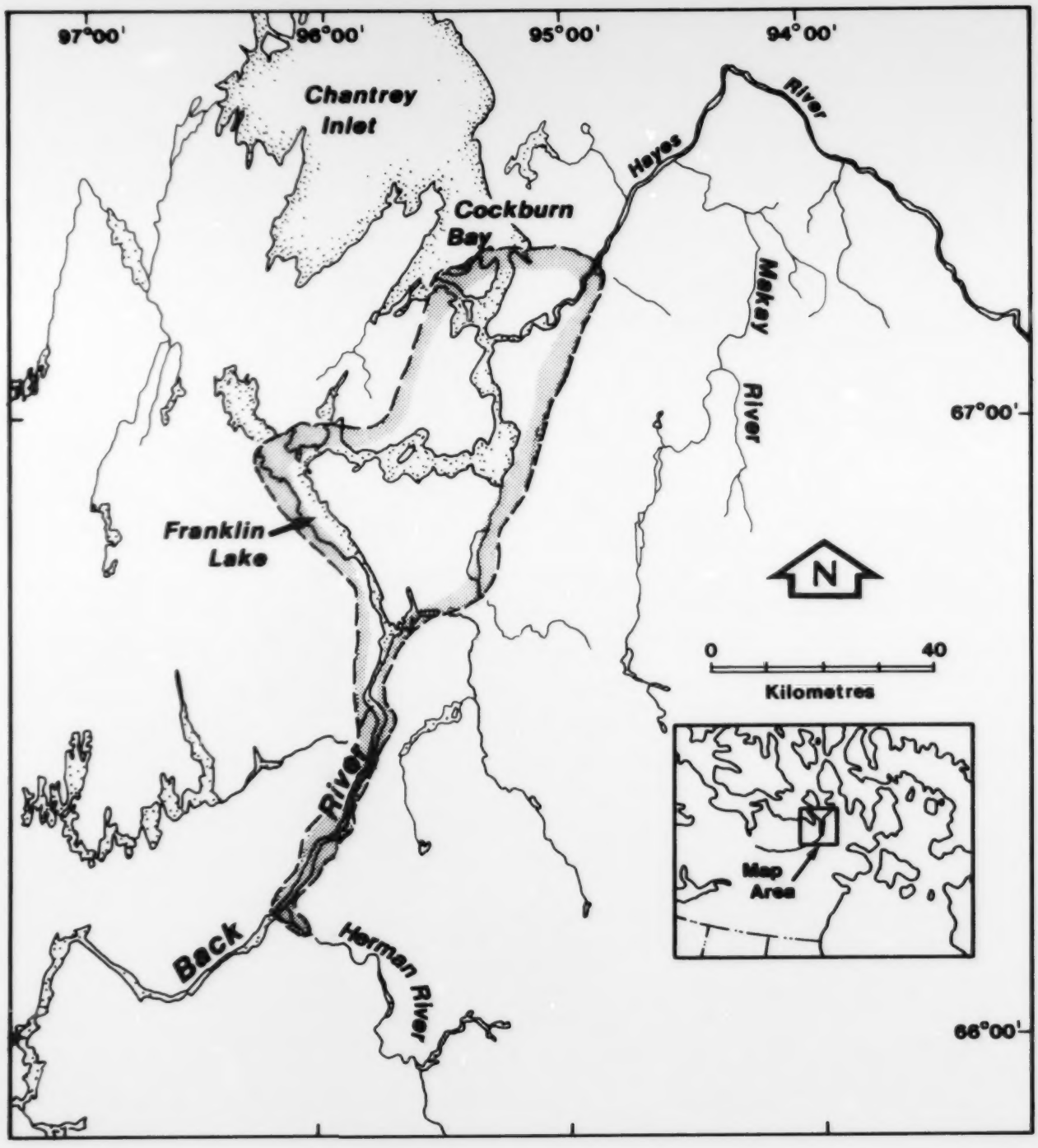
Site 53: Lower Back River



Site 53: Lower Back River

Location: 67°00′N, 95°21′W **Size: 2640 km²**

Description

This site includes an area along the lower Back River from the junction of the Herman River downstream, along the southern and eastern shores of Franklin Lake, to the junction of the Hayes River and north to Cockburn Bay. The site ranges from 10 to 30 km in width and occurs approximately 200 km north of the settlement of Baker Lake.

The Franklin Lake shoreline is rocky and poorly vegetated. The mouth of the Back River is a network of channels interspersed with extensive sand and mud flats. The Hayes River is one of the first areas of open water in spring in this region (Allen and Hogg 1979).

Biological value

The status of this area as a Key Habitat Site is tentative; the available data are inadequate for a full assessment.

This site may be an important spring staging area, particularly around the confluence of the Hayes and Back rivers, where the presence of open water attracts spring migrants. A single aerial survey was flown in spring of 1976 and 1977. In 1976, there were 762 Canada Geese, nearly 600 Lesser Snow Geese, 724 Brant, and 236 Tundra Swans (Zdan and Brackett 1978). In general, fewer birds were seen in 1977; the exception was 409 Tundra Swans (Allen and Hogg 1979). Small numbers of Sandhill Cranes, King Eiders, scoters, loons, and shorebirds were also noted. However, single surveys at staging areas are not adequate for determining extent of use by migrants.

The lower reaches of the Back River, its tributaries, and the southern and eastern shores of Franklin Lake are used by moulting Canada Geese and Lesser Snow Geese. More than 900 Canada Geese (likely subspecies *maxima*; Dzubin et al. 1978) were recorded between the Herman River and Chantrey Inlet in mid-July 1976. Approximately 620 birds were recorded in early July 1977 (Allen and Hogg 1979). In 1984 and 1986, the numbers of moulting geese were estimated at 1660 and 2900 birds, respectively (McCormick and Arner 1986; McCormick and Bromley 1990, using estimation procedure in Alexander 1990). The latter number probably exceeds 1% of the national population of the subspecies *maxima*.

More than 4700 moulting and brood-rearing Lesser Snow Geese were also recorded in the same area on 12 July 1976. Far fewer Lesser Snow Geese were seen in 1984 and 1986 (McCormick and Arner 1986; McCormick and Bromley 1990). A small number of geese breed in the area, probably around Madam Daly Lake (McLaren et al. 1977).

Barren-ground caribou and muskoxen inhabit the area (Fischer and Duncan 1976). Arctic char, lake trout, and whitefish are common in the Back River and Hayes River drainages (Hatfield et al. 1977). Ringed seals are common in Chantrey Inlet (Boyd et al. 1978).

Sensitivities

Staging and moulting water birds are sensitive to disturbance and pollution.

Potential conflicts

This area was on the route of the proposed Polar Gas Pipeline. At present, there are no known conflicts.

Status of Key Habitat Site

No special status.

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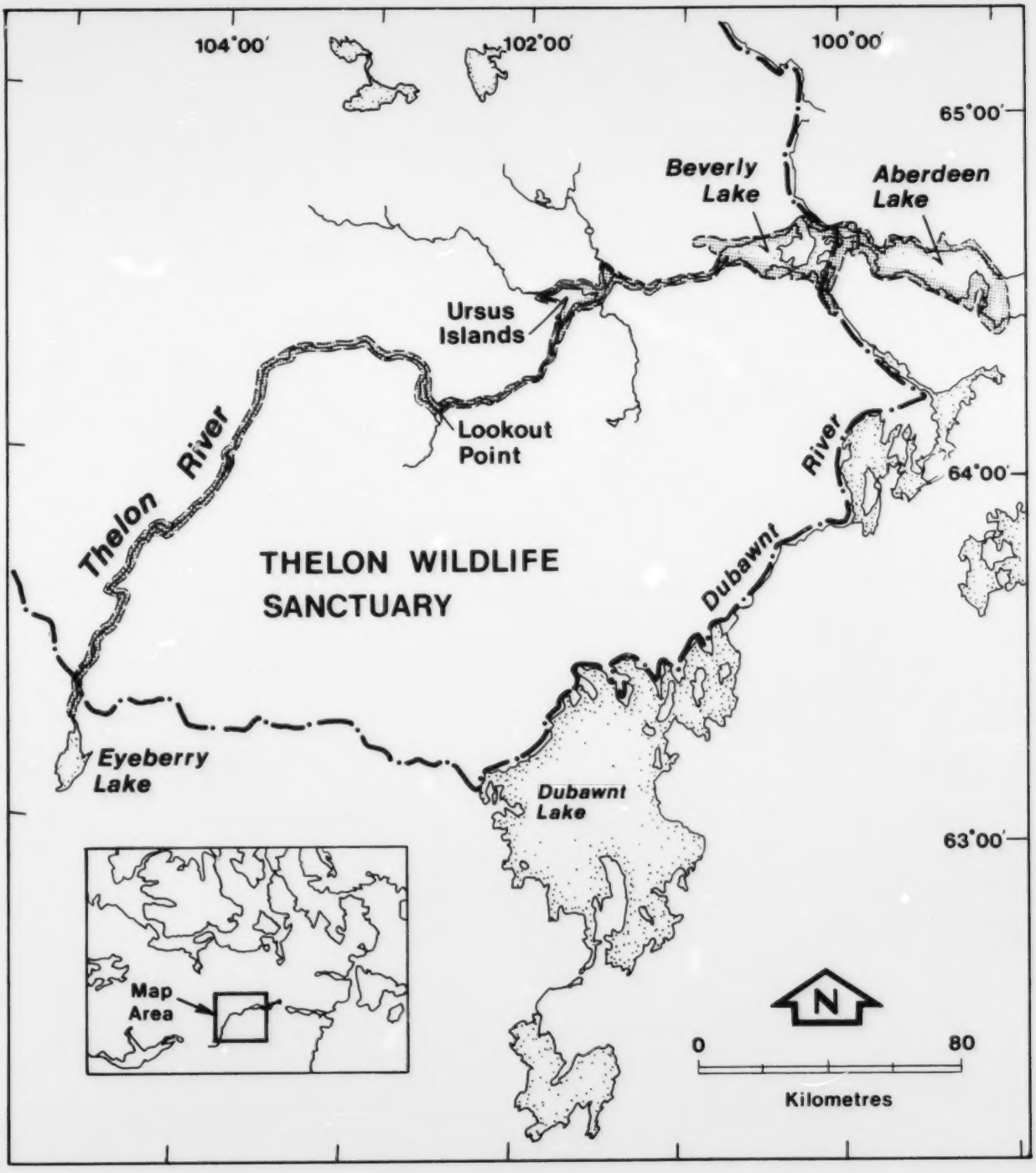
104°00′
102°00′
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Beverly Lake
Aberdeen Lake
Ursus Islands
Lookout Point
Thelon River
Dubawnt River
THELON WILDLIFE SANCTUARY
Eyeberry Lake
Dubawnt Lake
Map Area
N
0
80
Kilometres

Site 54: Thelon River

Location: 64°30′N, 101°45′W **Size: 953 km²**

Description

This area includes the Thelon River and adjacent shoreline from Eyeberry Lake to Aberdeen Lake, and 20 km upstream along the Dubawnt River. Baker Lake is 150 km east of the eastern end of this area.

The underlying rock formation is Proterozoic sandstone, much of which is obscured by low-relief Pleistocene deposits of glacial till. The area around Lookout Point is within a sand–silt formation. The Ursus Islands area is largely sandstone and pebbly sandstone (Bird 1951). Most of the Beverly Lake–Aberdeen Lake region is underlain by Dubawnt sandstone. The low and rolling area is covered with unbroken glacial till that has been sorted into expanses of sand and pebbles. Continuous and discontinuous eskers are common. A late glacial lake inundated much of the area; strandlines and wave-cut beaches are evident (Bird 1967). A large delta occurs on the south side of Beverly Lake.

The vegetation belongs to the northern transition section of the boreal forest, giving way to low Arctic around Beverly Lake. From Lookout Point to Ursus Islands, the riverbanks are wooded with spruce, larch, and willows. The riverbanks between Ursus Islands and Beverly Lake are high but not precipitous. Adjacent wet sedge meadows and moss–sedge complexes provide suitable grazing areas for geese. A few stunted spruce are found in gullies.

Biological value

Up to 18 000 nonbreeding Canada Geese, originating in the northern United States and southern Canada, use this area to moult (Kuyt 1966; Alexander 1990; Sirois and McCormick 1991). Most of the geese belong to the *maxima* and *moffitti* subspecies (Sterling and Dzubin 1967). There is some indication that birds in the western part of the area are from the Pacific, Highline Plains, and Rocky Mountain management units, whereas those east of Beverly Lake are from the Western Prairie and Manitoba Interlake management units (Kuyt 1966; Sterling and Dzubin 1967). This number represents approximately 3% of the national population of the Eastern Prairie, Western Prairie, and giant Canada Goose (Mississippi Flyway) populations.

Flocks of Canada Geese generally appear in mid-June and depart soon after moulting is completed in mid-August (Sterling and Dzubin 1967).

Greater White-fronted Geese are known to breed in the area. In 1960, Kuyt (1962) reported 30 broods between Beverly and Aberdeen lakes. Tundra Swans also breed and moult west of Beverly Lake. Islands in Beverly Lake provide habitat for some of the few inland breeding colonies (numbering up to 140 pairs) of Lesser Snow Geese (Alexander 1990).

Raptor nesting areas are found on the north shores of Beverly and Aberdeen lakes (Kuyt 1980).

Calving grounds for the Beverly caribou herd lie along the northern boundary of the area. Several of the herd's river crossings are also in this area.

Sensitivities

Geese are sensitive to disturbance during moulting.

Potential conflicts

The surrounding area is suspected to have high potential for uranium mining. The proposed Kiggavik uranium mine site is located approximately 55 km east of the Key Habitat Site.

Status of Key Habitat Site

IBP Site; most of this site occurs within the Thelon Wildlife Sanctuary; lands within the Thelon Wildlife Sanctuary have been withdrawn from disposition under the Territorial Lands Act (P.C. 1972-1099), thereby effectively prohibiting mineral exploration and development.

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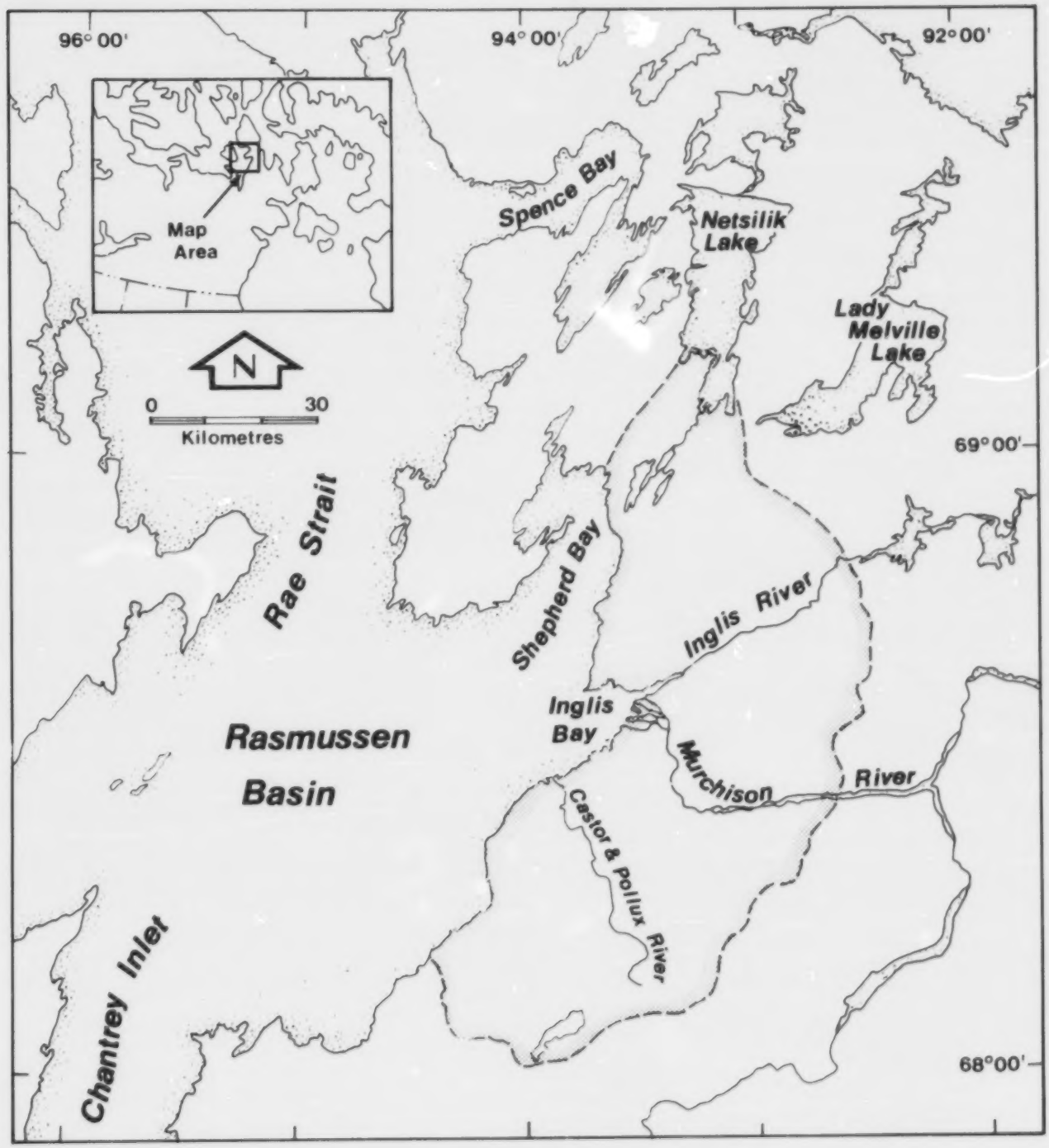
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Map Area
N
0
30
Kilometres
Spence Bay
Netsilik Lake
Lady Melville Lake
69° 00'
Rae Strait
Shepherd Bay
Inglis River
Inglis Bay
Rasmussen Basin
Murchison River
Castor & Pollux River
Chantrey Inlet
68° 00'

Site 55: Rasmussen Lowlands

Location: 68°40′N, 93°00′W **Size:** 5278 km²

Description

The Rasmussen Lowlands extend along the east side of Rae Strait and Rasmussen Basin, from the south shore of Netsilik Lake to approximately 45 km north of Chantrey Inlet. The settlement of Spence Bay is located about 55 km north of the site.

The lowlands, which are of Paleozoic origin, represent an area of recent marine emergence. The southern portion of the lowlands is flat, poorly drained, and covered with marine silts and sands, with an occasional esker or rock outcrop. Approximately 10 km north of the Inglis River, glacial moraine protrudes through the marine sediments, forming the gently rolling Ross Hills. Numerous lakes and ponds are scattered throughout the lowlands. The escarpment of the Wager Highlands occurs along the eastern border.

Habitats in the lowlands vary from partially vegetated, dry tundra to densely vegetated, sedge marsh. Tussocky sedge meadows and sedge marshes are predominant.

Biological value

The lowlands support a high diversity and high density of summering birds. In the order of 1.5 million birds from 46 species, 35 of which are known to breed, used the lowlands in 1975 and 1976 (McLaren et al. 1977).

The Rasmussen Lowlands are the most important nesting area in the eastern Arctic for Tundra Swans. An estimated 5000 to 6000 adults summered in the area during 1976 (McLaren et al. 1977). This figure represents over 4% of the Canadian population. The lowlands are also important to Greater White-fronted Geese, some 13 000 of which, about 10% of the Canadian population, nested and moulted in the area in 1977 (Allen and Hogg 1979). Between 500 and 1000 Sabine's Gulls nest on the lowlands, representing between 2 and 5% of the national population.

McLaren et al. (1977) also observed 5000 to 6000 moulting and breeding Lesser Snow Geese; 10 000 to 15 000 Oldsquaws; 30 000 to 35 000 King Eiders; about 500 000 shorebirds, mostly Red Phalaropes (40%), White-rumped Sandpipers, Pectoral Sandpipers, Lesser Golden-Plovers, Black-bellied Plovers, and Semipalmated Sandpipers; and about 845 000 Lapland Longspurs (92%), Horned Larks, and Snow Buntings. Although the above population estimates need updating, it is likely that the estimates for King Eiders, the first five shorebird species above, and Lapland Longspurs exceed 1% of their respective national populations. Unfortunately, national population estimates are not available for these species. Seven Peregrine Falcon nest sites were located along the eastern escarpment and adjacent highlands (McLaren et al. 1977).

Most birds arrive in late May and depart by mid- to late September, although Oldsquaws and King Eiders may remain in the area until freezeup.

Sensitivities

Wetland areas are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Wildlife in the area is sensitive to disturbance.

Pollution of offshore waters would result in the degradation of shoreline habitats.

Potential conflicts

The Rasmussen Lowlands were on the route of the proposed Polar Gas Pipeline. At present, there are no impending conflicts.

Status of Key Habitat Site

Wetland of International Importance.

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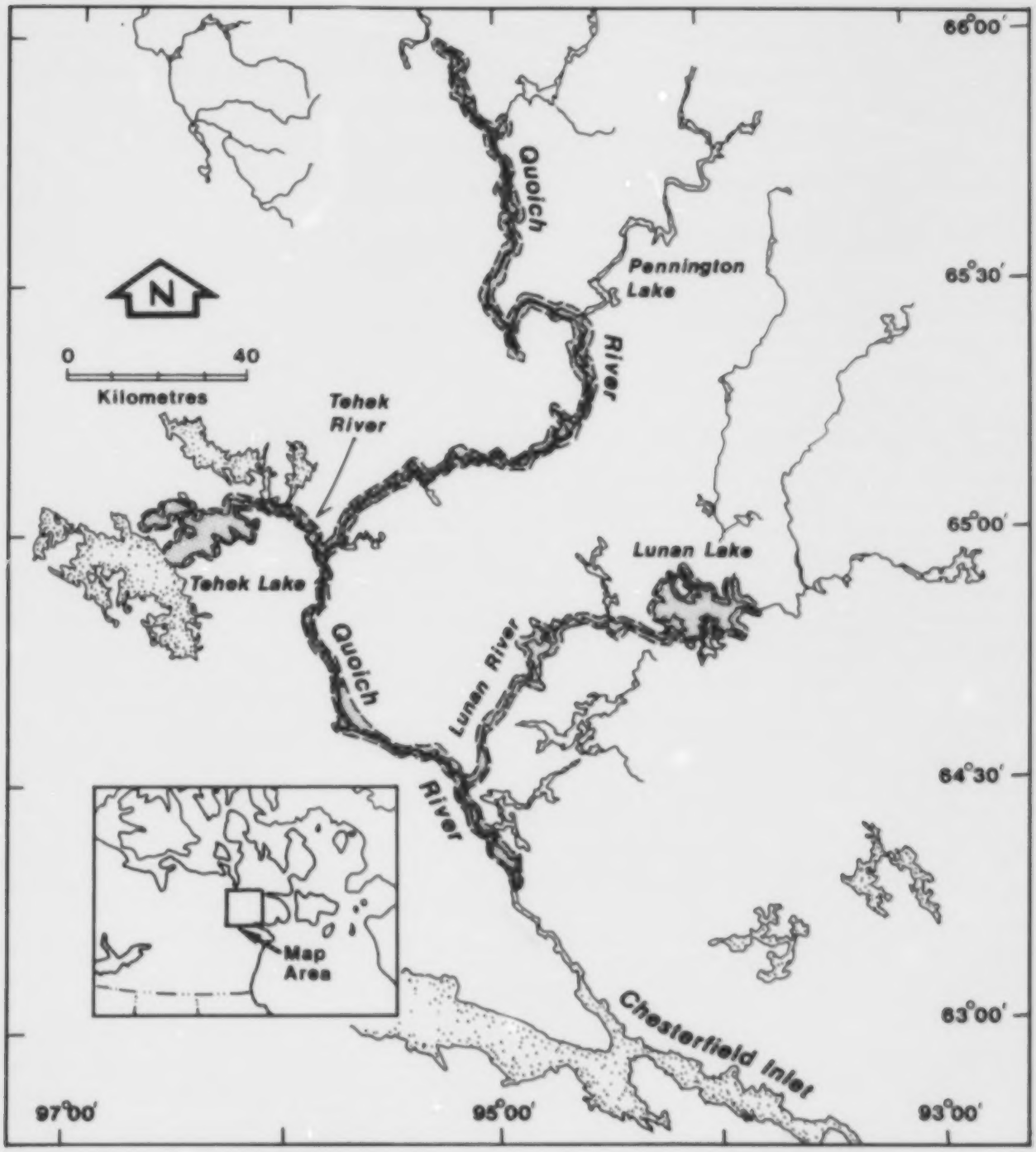
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Kilometres
Quoich River
Pennington Lake
Tehek River
Tehek Lake
Lunan Lake
Lunan River
Quoich River
Map Area
Chesterfield Inlet

Site 56: Middle Quoich River

Location: 65°25'N, 93°35'W **Size:** 1333 km²

Description

This site includes approximately 210 km of the Quoich River valley, from a point 40 km north of its junction with Chesterfield Inlet to 66°N latitude. The east end of Tehek Lake, Tehek River, Lunan Lake, and Lunan River are also included. The area occurs approximately 100 km east and northeast of the settlement of Baker Lake.

The Quoich River flows through a broad, gently rolling, open valley with many scattered lakes and ponds. Bedrock of Proterozoic origin, consisting mainly of granitic and allied rocks, occupies much of the area (Wright 1967). Eskers are common in the upper river basin. Stone and sand glacial till and fluvial deposits, which are common throughout the lower river valley, are evidence of former marine transgression. Numerous small lakes and localized wet meadows and associated tussocks make the area attractive to moulting geese.

Biological value

The status of this area as a Key Habitat Site is tentative; the available data are inadequate for a full assessment.

This site is a summer moulting ground for several thousand large Canada Geese (probably part of the Eastern Prairie population; subspecies *interior*). A maximum of 3400 birds was noted in July 1966 (Sterling and Dzubin 1967), which is about 1% of the national population of the *interior* subspecies. Some giant Canada Geese may also moult in this area from late June to early August. A small number of Canada Geese (3.5 birds/km) were found on 168 km of river in late August 1975 (McLaren et al. 1976). Canada Goose populations have expanded markedly over the last 20 years. Recent studies have shown that moulting Canada Goose numbers have increased along parts of the Back River (McCormick and Bromley 1990) but not along the Thelon River (Alexander 1990). Further studies are required to determine the number of birds currently using the Quoich River site.

Moulting geese feed on the sedge–graminoid meadows along the riverbanks and use the rivers and lakes as retreats during the flightless period (Sterling and Dzubin 1967).

Canada Geese generally arrive by mid-June and leave by late August (Sterling and Dzubin 1967).

The upper valley of the Quoich River is an important summering and wintering area for caribou (Calef and Heard 1979).

Sensitivities

Geese are sensitive to disturbance during moulting. Repeated disturbance has been known to cause certain flocks to abandon some moulting areas (Sterling and Dzubin 1967).

Potential conflicts

None.

Status of Key Habitat Site

No special status.

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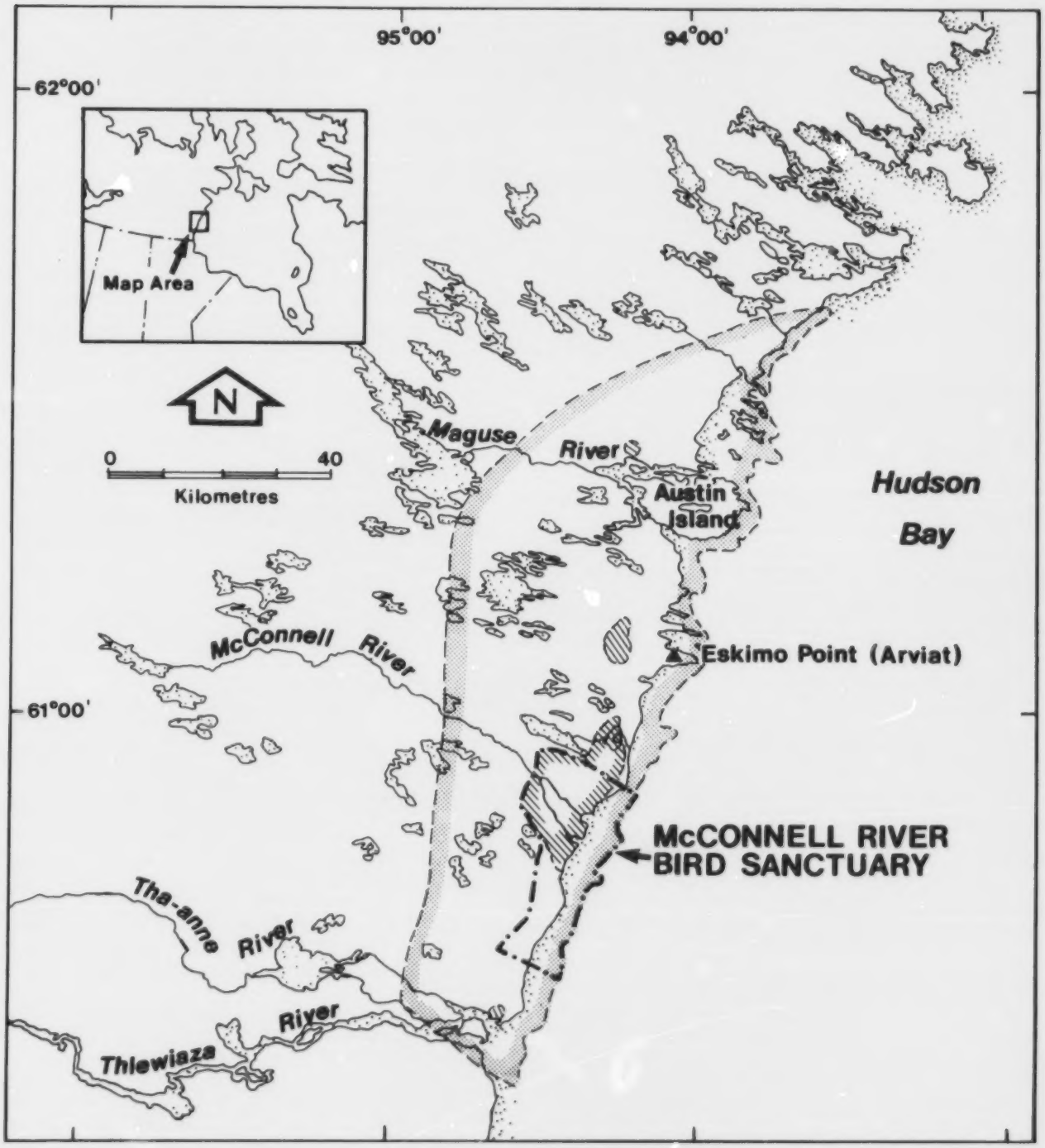
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Map Area
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McCONNELL RIVER BIRD SANCTUARY
Tha-anne River
Thlewiaza River

Site 57: McConnell River

Location: 60°50′N, 94°20′W **Size:** 4940 km²

Description

This area includes coastal habitats between the Thlewiaza River and the Maguse River on the west coast of Hudson Bay. The area is underlain by Precambrian rock of the Canadian Shield; however, there are very few rock outcrops near the coast, particularly south of Austin Island. The landscape has a low relief, rising to about 60 m in the western portion of the area. Extensive marsh flats occur along the coast, extending 3–8 km inland. Farther inland, there are low hills and numerous lakes. A research station at the mouth of the McConnell River, operated from 1964 to the early 1970s, produced extensive information on the breeding ecology of Canada and Lesser Snow geese.

Biological value

In 1973, the total nesting population of Lesser Snow Geese in this area was approximately 195 000 pairs. Many thousands of nonbreeding geese were also observed. Nearly 1.3 million geese were present along the coastline after the hatch (Kerbes 1975). Between 1973 and 1980, the number of breeding Lesser Snow Geese decreased to 154 000 pairs, but the total nesting area of the colonies expanded considerably (Kerbes 1982, and pers. commun.). By 1985, the number of geese had increased to a high of 218 170 pairs (R.H. Kerbes, pers. commun.), representing 24% of the national population of Lesser Snow Geese. The coastal sedge lowlands provide nesting habitat for the geese; the adjacent ponds, lakes, and inland areas are critical for feeding and moulting.

Geese reach the nesting areas by late May and move to inland feeding areas by the third week in August. Few birds remain in the area after the beginning of September.

The area is also utilized by nesting small Canada Geese and Sandhill Cranes. At least 111 bird species have been recorded for the McConnell River area, including unusual sightings of prairie and woodland species.

Barren-ground caribou of the Kaminuriak herd winter along the Hudson Bay coast from the Manitoba border to Eskimo Point. Ringed seals, white whales, and polar bears are found in coastal areas and offshore waters.

Sensitivities

Geese are susceptible to disturbance and the degradation of their lowland terrestrial habitats.

Potential conflicts

None.

Status of Key Habitat Site

McConnell River Bird Sanctuary; Wetland of International Importance; IBP Site.

References

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories — a background paper. Unpubl. rep., Can. Wildl. Serv., Edmonton. 3 vols. 370 pp.

International Union for Conservation of Nature and Natural Resources. 1987. Directory of wetlands of international importance. IUCN, Cambridge, U.K. 445 pp.

Kerbes, R.H. 1975. Lesser Snow Geese in the eastern Canadian Arctic. Rep. Ser. No. 35, Can. Wildl. Serv., Ottawa. 47 pp.

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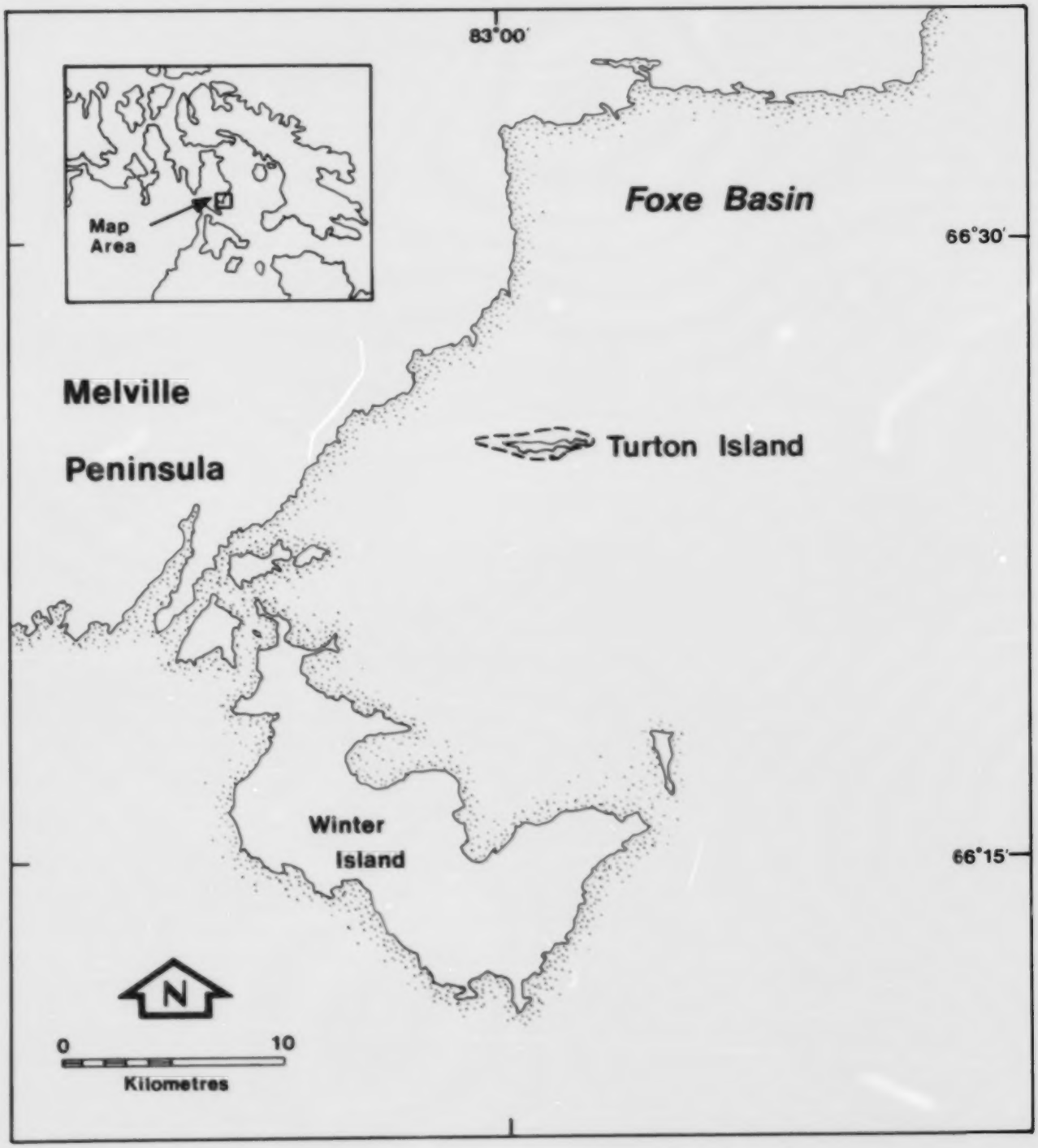
Kerbes, R.H. 1982. Lesser Snow Geese and their habitat on west Hudson Bay. Nat. Can. 109:905–911.

McLaren, P.L.; McLaren, M.A. 1982. Migration and summer distribution of Lesser Snow Geese in interior Keewatin. Wilson Bull. 94:494–504.

McLaren, P.L.; Davis, R.A.; Renaud, W.E.; Holdsworth, C. 1976. Studies of the numbers and distribution of birds in the District of Keewatin, NWT, June–August, 1975. Unpubl. rep., LGL Ltd., for Polar Gas Project, Toronto. 391 pp.

McLaren, P.L.; McLaren, M.A.; Patterson, L.A. 1977. Numbers and distribution of birds during migration in the District of Keewatin, northern Manitoba, and northwestern Ontario, 1976. Unpubl. rep., LGL Ltd., for Polar Gas Project, Toronto. 284 pp.


83°00'
Foxe Basin
66°30'
Map Area
Melville Peninsula
Turton Island
Winter Island
66°15'
N
0
10
Kilometres

Site 58: Turton Island

Location: 66°24′N, 82°55′W **Size:** 2 km²

Description

Turton Island lies in Foxe Basin, just off the southeast coast of the Melville Peninsula, about 140 km east of the community of Repulse Bay. The island is dotted by a few small ponds. Foreshore flats extend off the north side of the island.

Biological value

Gaston et al. (1986) reported several thousand Common Eiders (presumably the northern subspecies *borealis*; Abraham and Finney 1986) nesting on this island. During the same study, the authors also saw several thousand Common Eiders nesting at a colony in East Bay, Southampton Island, which, at 3800 to 5900 pairs, is one of the largest colonies of Northern Common Eiders in the Canadian Arctic (Abraham and Ankney 1986). Therefore, it is reasonable to assume that at least 3000 birds (1500 pairs) were present at Turton Island. This would represent just under 2% of the national population of the northern subspecies. More data are needed to confirm the importance of this site.

Based on studies in Ungava Bay, the eiders migrate into the area in late May; by early June, with the breakup of ice around the nesting islands, they have moved onto the colonies and initiated nesting. Laying of replacement clutches may continue into late July. Once the clutch has been laid and incubation begins, the males likely leave the islands and moult elsewhere. Ducklings hatch throughout July and early August; shortly thereafter, the females and ducklings likely leave the nesting island (Nakashima 1986).

Other bird species nesting on Turton Island include Tundra Swans, Canada Geese, Brant, Black Guillemots, Herring Gulls, and Arctic Terns (Anon. 1984).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution, particularly hydrocarbons, in the surrounding marine environment may be detrimental to the eiders.

Potential conflicts

None.

Status of Key Habitat Site

No special status.

References

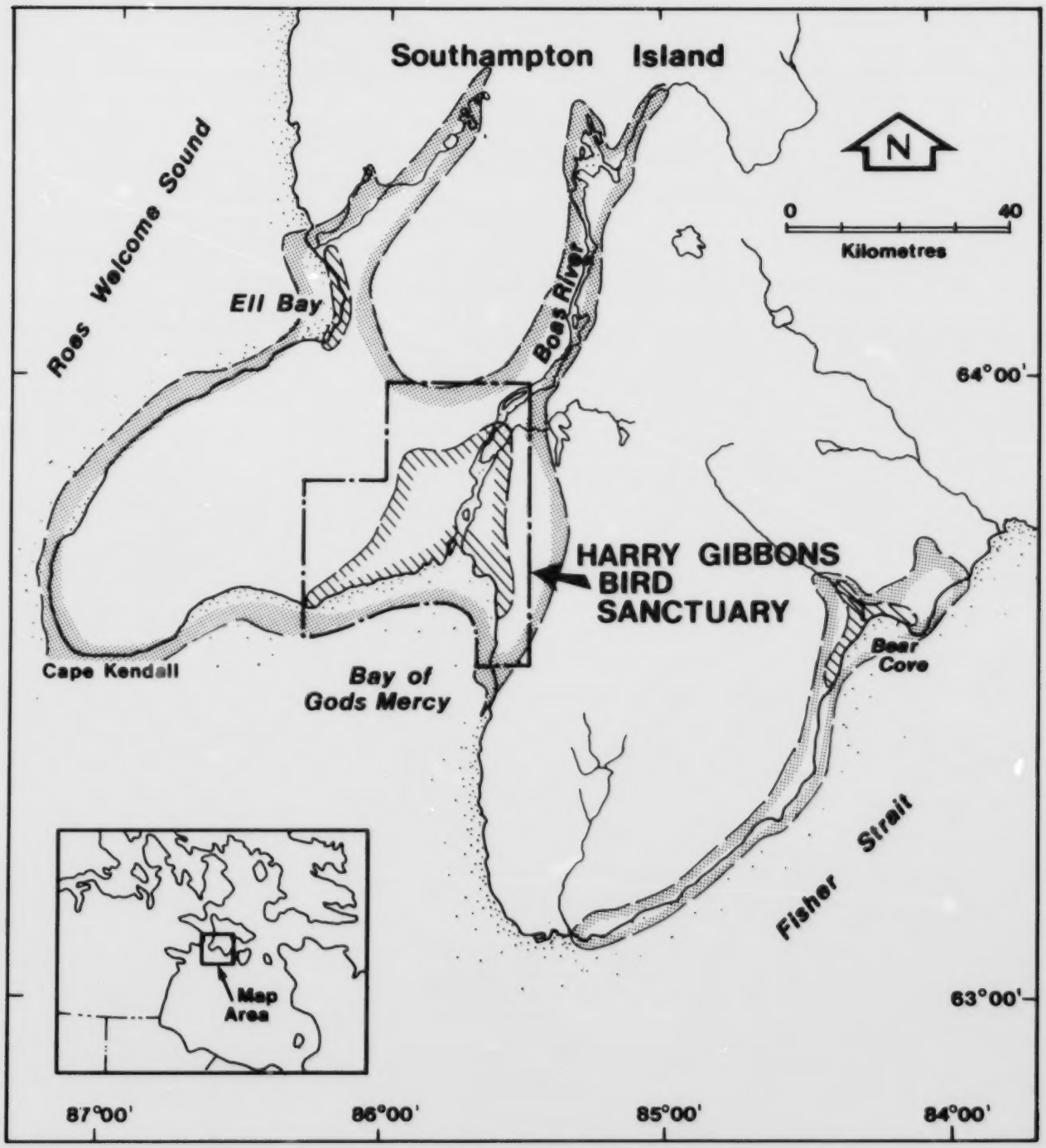
Abraham, K.F.; Ankney, C.D. 1986. Summer birds of East Bay, Southampton Island, Northwest Territories. Can. Field-Nat. 100:180–185.

Abraham, K.F.; Finney, G.H. 1986. Eiders of the eastern Canadian Arctic. Pages 55–73 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Anonymous. 1984. Land Use Information Series Maps: Winter Island. Map 46 I, J. Environment Canada, Ottawa.

Gaston, A.J.; Decker, R.; Cooch, F.G.; Reed, A. 1986. The distribution of larger species of birds breeding on the coasts of Foxe Basin and northern Hudson Bay, Canada. Arctic 39(4):285–296.

Nakashima, D.J. 1986. Inuit knowledge of the ecology of the Common Eider in northern Quebec. Pages 102–113 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.


Southampton Island
Ross Welcome Sound
Ell Bay
Boas River
N
0
40
Kilometres
64°00'
HARRY GIBBONS
BIRD
SANCTUARY
Cape Kendall
Bay of
Gods Mercy
Bear
Cove
Fisher Strait
Map
Area
63°00'
87°00'
86°00'
85°00'
84°00'

Site 59: Boas River

Location: 63°45′N, 85°40′W **Size:** 5402 km²

Description

Boas River is located on southwestern Southampton Island at the northern extremity of Hudson Bay. The area is underlain by Paleozoic limestone and is covered with glacial drift and beach deposits. There is little relief; much of the area lies below 60 m elevation. The Boas River flows southward through the area, across an extensive sedge lowland, and empties into the Bay of Gods Mercy. Numerous lakes are scattered throughout the lowlands. Extensive tidal flats are found along most of the coastline.

A recurring polynya occurs near Cape Kendall in Roes Welcome Sound (Stirling and Cleator 1981).

Biological value

Approximately 10% of the Lesser Snow Geese in Canada occur in the Boas River–Ell Bay area (Reed et al. 1987). The largest colony is situated around the Boas River delta. Smaller concentrations are located at Ell Bay, Bear Cove, and along 20 km of coastline west of the Boas River colony. The numbers of geese nesting in these colonies increased from 69 400 pairs in 1973 to 95 200 pairs in 1979 (Kerbes 1975; Reed et al. 1987). Since 1979, there have been substantial increases in numbers of Lesser Snow Geese at other nesting colonies, and this is likely also the case for the Boas River area. Feeding habitat for geese extends inland from the nesting area to include adjacent marsh and sedge lowlands.

Snow Geese arrive in late May or early June. Nonbreeding Snow Geese leave the area in mid-August, followed by the breeding birds in early September.

The Boas River area also supports nesting populations of Atlantic Brant, Canada Geese, and Tundra Swans. Thirty or more avian species are reported for this area of Southampton Island (Nettleship and Smith 1975).

The Roes Welcome Sound polynya serves as a wintering area for white whales, walruses, and harbour seals; polar bears, bearded seals, and ringed seals are permanent residents in the area. Bowhead whales and narwhals use the polynya as a summer feeding area (Stirling and Cleator 1981).

Sensitivities

The lowlands are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Geese and other wildlife are sensitive to disturbance.

Potential conflicts

None.

Status of Key Habitat Site

Part of the site lies within Harry Gibbons Bird Sanctuary; IBP Site.

References

Cooch, F.G. 1968. Birds. Pages 443–446 *in* C.S. Beals (ed.). Science, history, and Hudson Bay. Vol. 1. Dep. Energy, Mines Resour., Ottawa.

Kerbes, R.H. 1975. Lesser Snow Geese in the eastern Canadian Arctic. Rep. Ser. No. 35, Can. Wildl. Serv., Ottawa. 47 pp.

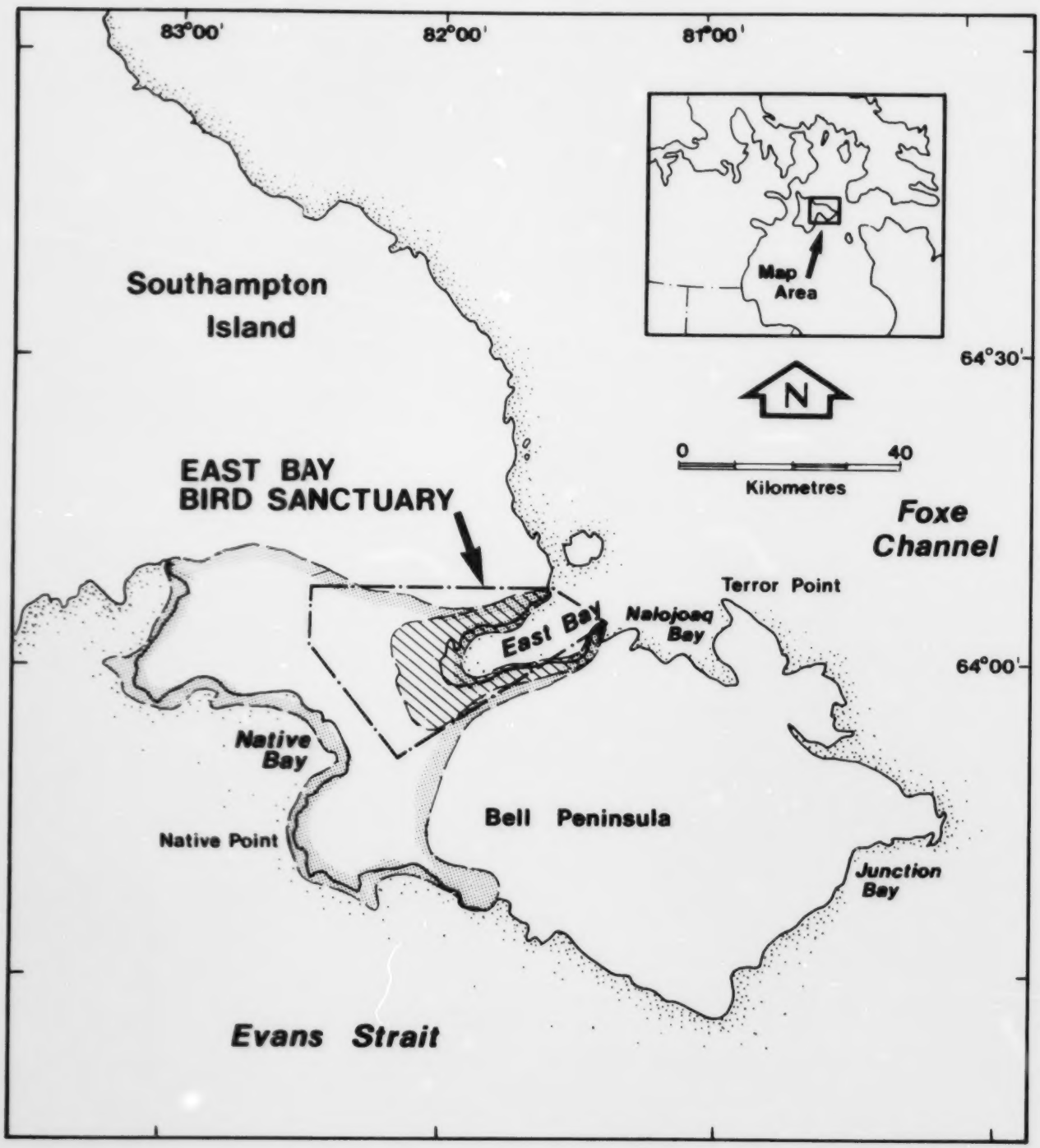
Nettleship, D.N.; Smith, P.A. (eds.). 1975. Ecological sites in northern Canada. Can. Comm. Int. Biol. Program, Conserv. Terr., Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Parker, G.R. 1975. An investigation of caribou range on Southampton Island, NWT. Rep. Ser. No. 33, Can. Wildl. Serv., Ottawa. 82 pp.

Parker, G.R.; Ross, R.K. 1973. Notes on the birds of Southampton Island, Northwest Territories. Arctic 26(2):123–129.

Reed, A.; Dupuis, P.; Smith, G.E.J. 1987. A survey of Lesser Snow Geese on Southampton and Baffin islands, NWT, 1979. Occas. Pap. No. 61, Can. Wildl. Serv., Ottawa. 24 pp.

Stirling, I.; Cleator, H. (eds.). 1981. Polynyas in the Canadian Arctic. Occas. Pap. No. 45, Can. Wildl. Serv., Ottawa. 70 pp.


83°00'
82°00'
81°00'
Map Area
Southampton Island
64°30'
N
0
40
Kilometres
EAST BAY BIRD SANCTUARY
Foxe Channel
Terror Point
East Bay
Nalojoaq Bay
64°00'
Native Bay
Native Point
Bell Peninsula
Junction Bay
Evans Strait

Site 60: East Bay

Location: 64°00′N, 82°30′W **Size: 2506 km²**

Description

East Bay is an inlet, 50 km long, which lies on the southeast coast of Southampton Island, approximately 50 km east of the settlement of Coral Harbour.

Flat sedge meadows, separated by raised beaches, surround East Bay. As the land rises towards Native Bay, the meadow is broken by outcrops of disintegrated Ordovician and Silurian limestone. Bare Precambrian rock occurs to the north and south of the area.

Biological value

In 1979, the East Bay plain supported a nesting population of 21 300 pairs of Lesser Snow Geese, representing over 2% of the Canadian breeding population (Reed et al. 1987). An additional 1000 Snow Geese nest scattered in the lowlands between the southwestern boundary of the East Bay colony and the eastern shore of Native Bay (Kerbes 1975).

The prime nesting habitat is situated along the shores of East Bay, within 500 m of the high-tide line. The sedge lowlands near Native Bay provide important habitat for feeding and brood rearing.

During 1979 and 1980, 35 breeding pairs of Canada Geese and 450 nests of Atlantic Brant were documented at this site (Abraham and Ankney 1980; Reed et al. 1980).

An estimated 3800 to 5900 pairs of Common Eiders have nested on a small island in East Bay (Abraham and Ankney 1986). These birds are most likely members of the northern subspecies (*borealis*) of Common Eider and would represent 4–6% of the total population of that subspecies.

Walruses haul out at Terror Point, east of East Bay. This is the most northerly point used by the Coats Island group of walruses. An estimated 500 white whales also use East Bay during the summer (Allison 1977). Polar bears are known to migrate from Native Bay to East Bay in summer. The northeast side of Southampton Island is a denning area for polar bears.

Sensitivities

Nesting geese are sensitive to disturbance. The lowlands are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost.

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. Pollution, particularly hydrocarbons, in the surrounding marine environment may be detrimental to the eiders.

Potential conflicts

None.

Status of Key Habitat Site

Part of the area lies within East Bay Bird Sanctuary.

References

Abraham, K.F.; Ankney, C.D. 1980. Brant research on Southampton Island, NWT: a report of research completed during the summer of 1980. Unpubl. rep., Univ. of Western Ontario, London. 24 pp.

Abraham, K.F.; Ankney, C.D. 1986. Summer birds of East Bay, Southampton Island, Northwest Territories. Can. Field-Nat. 100(2):180–185.

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories — a background paper. Unpubl. rep., Can. Wildl. Serv., Edmonton. 3 vols. 370 pp.

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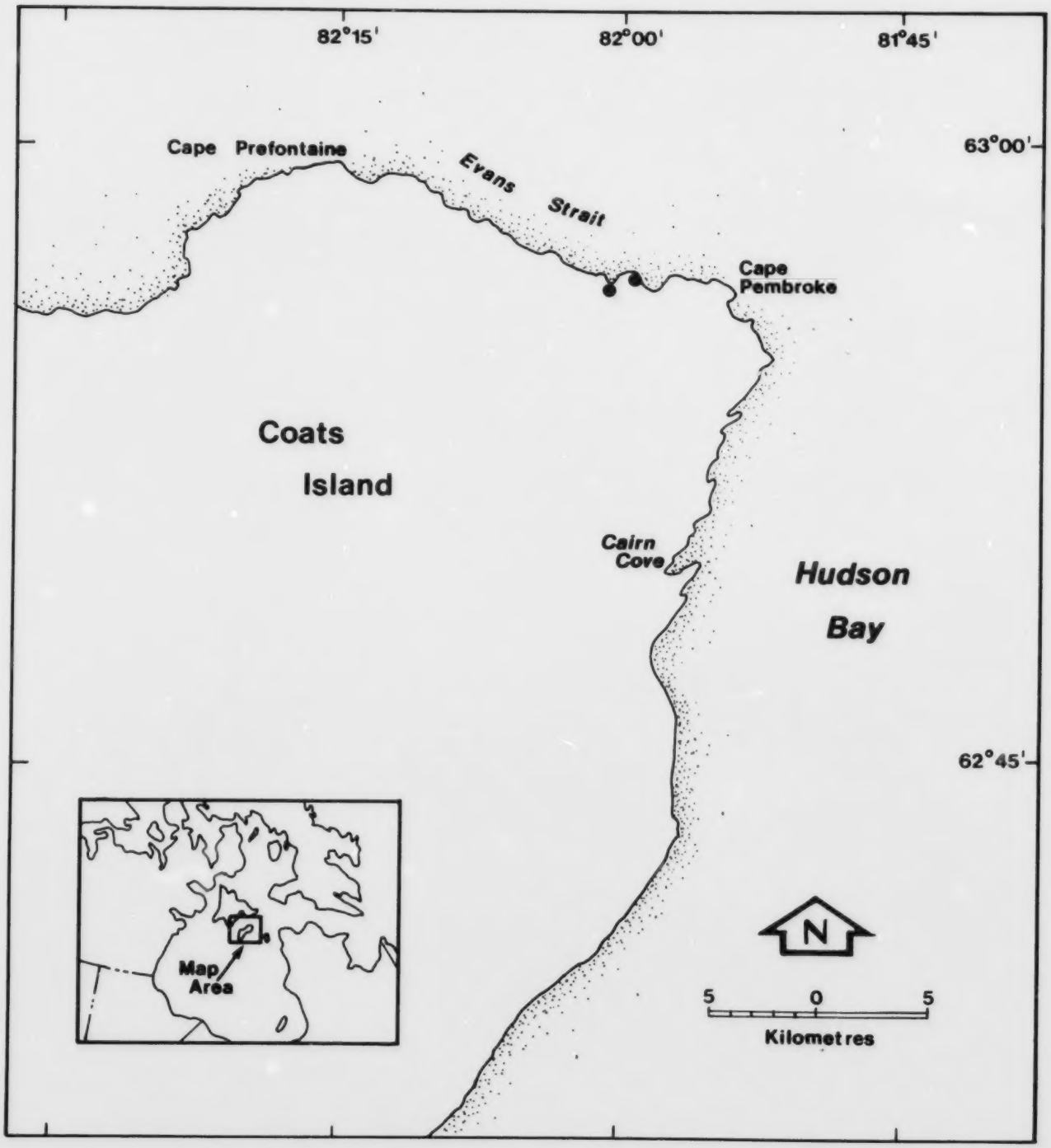
Reed, A.; Dupuis, P.; Fischer, K.; Moser, J. 1980. An aerial survey of breeding geese and other wildlife in Foxe Basin and northern Baffin Island, Northwest Territories, July, 1979. Prog. Note No. 114, Can. Wildl. Serv., Ottawa. 21 pp.

Reed, A.; Dupuis, P.; Smith, G.E.J. 1987. A survey of Lesser Snow Geese on Southampton and Baffin islands, NWT, 1979. Occas. Pap. No. 61, Can. Wildl. Serv., Ottawa. 24 pp.


82°15'
82°00'
81°45'
63°00'
62°45'
Cape Prefontaine
Evans Strait
Cape Pembroke
Coats Island
Cairn Cove
Hudson Bay
Map Area
N
5 0 5
Kilometres

Site 61: Coats Island

Location: 62°57′N, 82°00′W **Size: 3 km²**

Description

Coats Island is located in northern Hudson Bay, approximately 75 km east of Southampton Island and 110 km west of Mansel Island. The island is predominantly Ordovician and Silurian limestone with a low-lying flat topography covered by large areas of tundra ponds and raised beaches. A small, elevated outcrop of Precambrian gneiss occurs at Cape Pembroke, on the northeastern tip, where cliffs rise 215 m above sea level (Heywood and Sanford 1976).

Historical sites of former Inuit residents of northern Coats Island occur in the vicinity of Cape Pembroke.

Biological value

Two Thick-billed Murre colonies, consisting of about 24 000 breeding pairs (approximately 2% of the Canadian population), are located on steep rock cliffs 5 km west of Cape Pembroke (Gaston et al. 1987). Murres reach their nesting cliffs in May and depart, with their young, on a swimming migration by early September.

Black Guillemots, Peregrine Falcons, Glaucous Gulls, and Herring Gulls also nest on these cliffs. Atlantic Brant, Canada Geese, Tundra Swans, and Lesser Snow Geese breed on Coats Island (R. Kerbes, pers. commun.).

Polar bears frequent Coats Island year-round, denning in the vicinity of Cape Pembroke. Ringed, harp, and bearded seals are present in offshore waters during the summer. In the fall, an estimated 3000 walruses migrate to hauling-out areas along the coast near Cape Pembroke.

Sensitivities

Seabirds are sensitive to disturbance at their breeding cliffs and pollution of their marine foraging areas.

Potential conflicts

None.

Status of Key Habitat Site

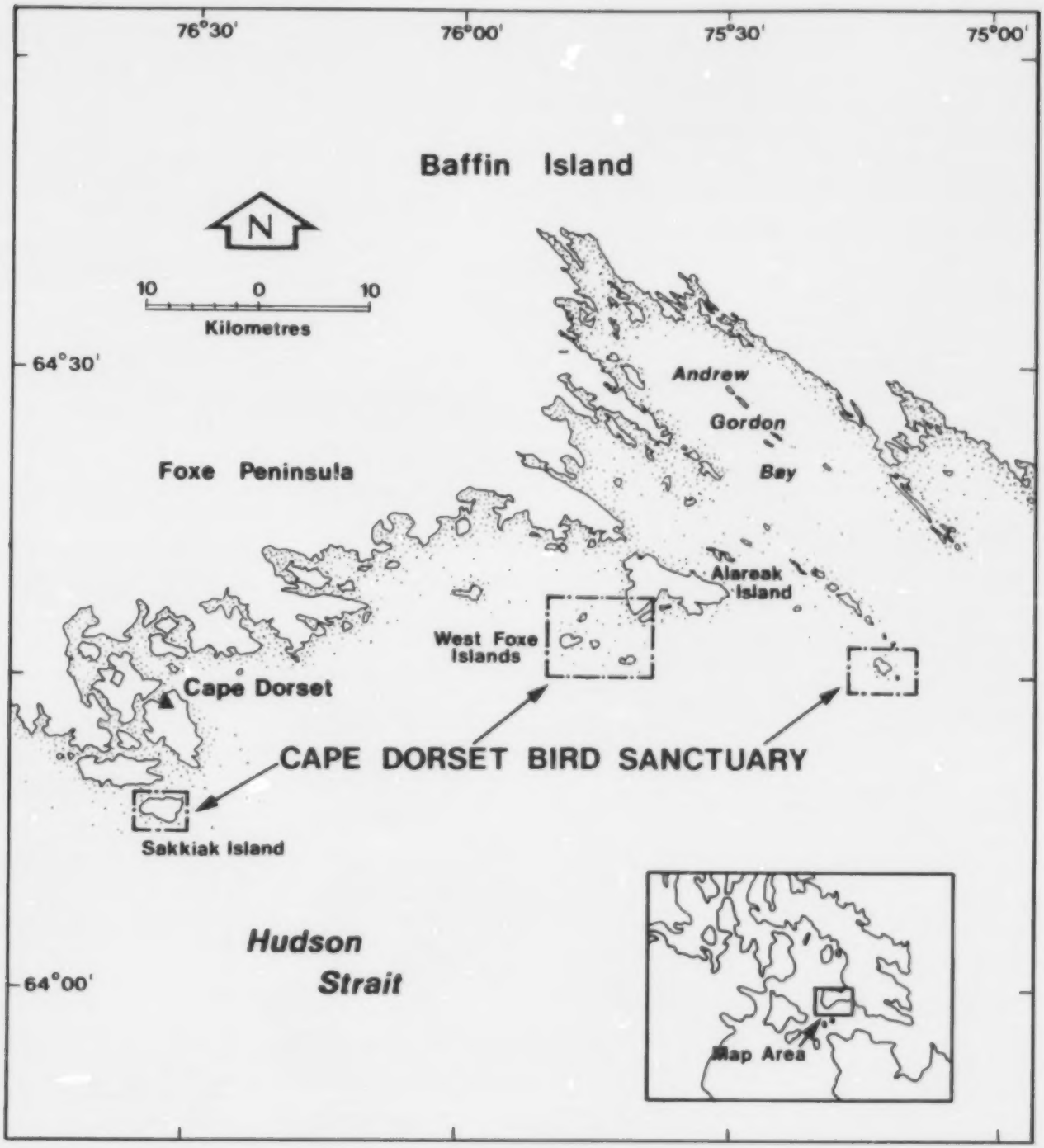
No special status.

References

Gaston, A.J.; Elliot, R.D.; Noble, D.G. 1987. Studies of Thick-billed Murres on Coats Island, Northwest Territories, in 1981, 1984, 1985, and 1986. Prog. Note No. 167, Can. Wildl. Serv., Ottawa. 13 pp.

Heywood, W.W.; Sanford, B.V. 1976. Geology of Southampton, Coats, and Mansel islands, District of Keewatin, NWT. Mem. 382, Geol. Surv. Can., Ottawa. 35 pp.

Tuck, L.M. 1960. The murres: their distribution, populations, and biology. A study of the genus *Uria*. Monogr. Ser. No. 1, Can. Wildl. Serv., Ottawa. 260 pp.


76°30'
76°00'
75°30'
75°00'
Baffin Island
N
10 0 10
Kilometres
64°30'
Andrew
Gordon
Bay
Foxe Peninsula
Alareak Island
West Foxe Islands
Cape Dorset
CAPE DORSET BIRD SANCTUARY
Sakkiak Island
Hudson Strait
64°00'
Map Area

Site 62: Cape Dorset

Location: 64°15′N, 76°00′W **Size: 259 km²**

Description

Three disjunct groups of islands comprise this site: Sakkiak Island, West Foxe Islands, and islands in south Andrew Gordon Bay. They are located on the southern tip of Foxe Peninsula, Baffin Island, adjacent to the settlement of Cape Dorset. The rocky islands have variable topography. Vegetation is concentrated around a few lowland ponds.

Cape Dorset Bird Sanctuary was established in 1957 to encourage the development of an eider down collecting industry among the local people. The sanctuary was established with the support of the local Inuit who, at that time, respected and enforced its protective status.

Biological value

Approximately 5000 Common Eiders bred in the area during the early 1950s. At that time, it was suspected that local use of the eiders (eggs, meat, and down) was maintaining the population at about 20% of the carrying capacity of the habitat (Cooch 1965).

Hunting pressure increased after 1966 when Inuit settled at Cape Dorset. On one island where 750 nests were recorded in 1956, fewer than 50 nests were found in 1976. For five islands, there was a decline from 1298 to 429 nests (67%). Further decreases were apparent from surveys in 1983 and 1984. In 1984, no eiders were seen within 150 km of Cape Dorset, including Sakkiak Island, which supported nearly 1100 pairs in 1955 (Cooch 1986).

Sensitivities

Eiders are sensitive to disturbance and overhunting on the breeding grounds and pollution of offshore waters.

Potential conflicts

Egg collecting and hunting are thought to have caused the decrease in the breeding population of Common Eiders within the sanctuary (Cooch 1986).

Status of Key Habitat Site

Cape Dorset Bird Sanctuary.

References

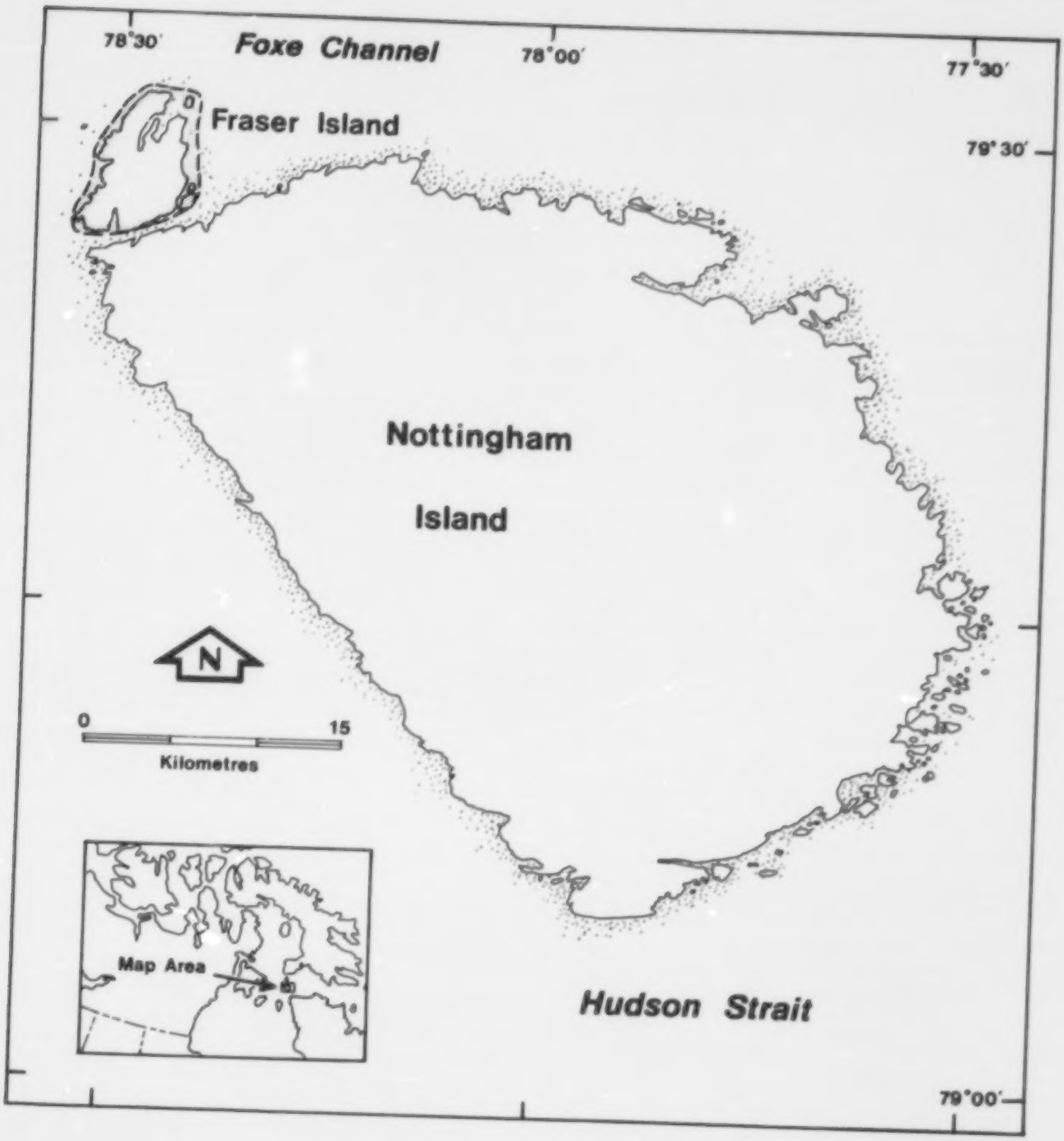
Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories — a background paper. Unpubl. rep., Can. Wildl. Serv., Edmonton. 3 vols. 370 pp.

Cooch, F.G. 1965. The breeding biology and management of the northern eider (*Somateria molissima borealis*) in the Cape Dorset area, Northwest Territories. Wildl. Manage. Bull., Ser. 2, No. 10, Can. Wildl. Serv., Ottawa. 68 pp.

Cooch, F.G. 1976. Two cultures — two settlements — Cape Dorset, 1956–1976. Unpubl. rep., Can. Wildl. Serv., Ottawa. 12 pp.

Cooch, F.G. 1986. The numbers of nesting Northern Eiders on the West Foxe Islands, NWT, in 1956 and 1976. Pages 114–118 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

MacPherson, A.H.; MacLaren, I.A. 1959. Notes on the birds of Southern Foxe Peninsula, Baffin Island, NWT. Can. Field-Nat. 73(2):63–81.


78°30'
Foxe Channel
78°00'
77°30'
Fraser Island
79°30'
Nottingham
Island
N
0
15
Kilometres
Map Area
Hudson Strait
79°00'

Site 63: Fraser Island

Location: 63°29'N, 78°30'W **Size: 35 km²**

Description

This area is a small island lying off the northwest tip of Nottingham Island, at the interface of Hudson Strait and Foxe Channel. The community of Cape Dorset is about 120 km to the northeast. The islands in this area are generally rocky, with variable topography and sparse vegetation. There was a meteorological station on Nottingham Island from 1927 to 1970, but it is now uninhabited.

Biological value

This area provides habitat for between 1000 and 3000 pairs of nesting Common Eiders (Gaston et al. 1986) (presumably the northern subspecies *borealis*; Abraham and Finney 1986), which represents 1–3% of the national population of the northern subspecies. Common Eiders also nest on small islands off the east end of Nottingham Island.

Based on studies in Ungava Bay, the eiders migrate into the area in late May; by early June, with the breakup of ice around the nesting islands, they have moved onto the colonies and initiated nesting. Laying of replacement clutches may continue into late July. Once the clutch has been laid and incubation begins, the males likely leave the islands and moult elsewhere. Ducklings hatch throughout July and early August; shortly thereafter, the females and ducklings likely leave the nesting island (Nakashima 1986).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution, particularly hydrocarbons, in the surrounding marine environment may be detrimental to the eiders.

Potential conflicts

None.

Status of Key Habitat Site

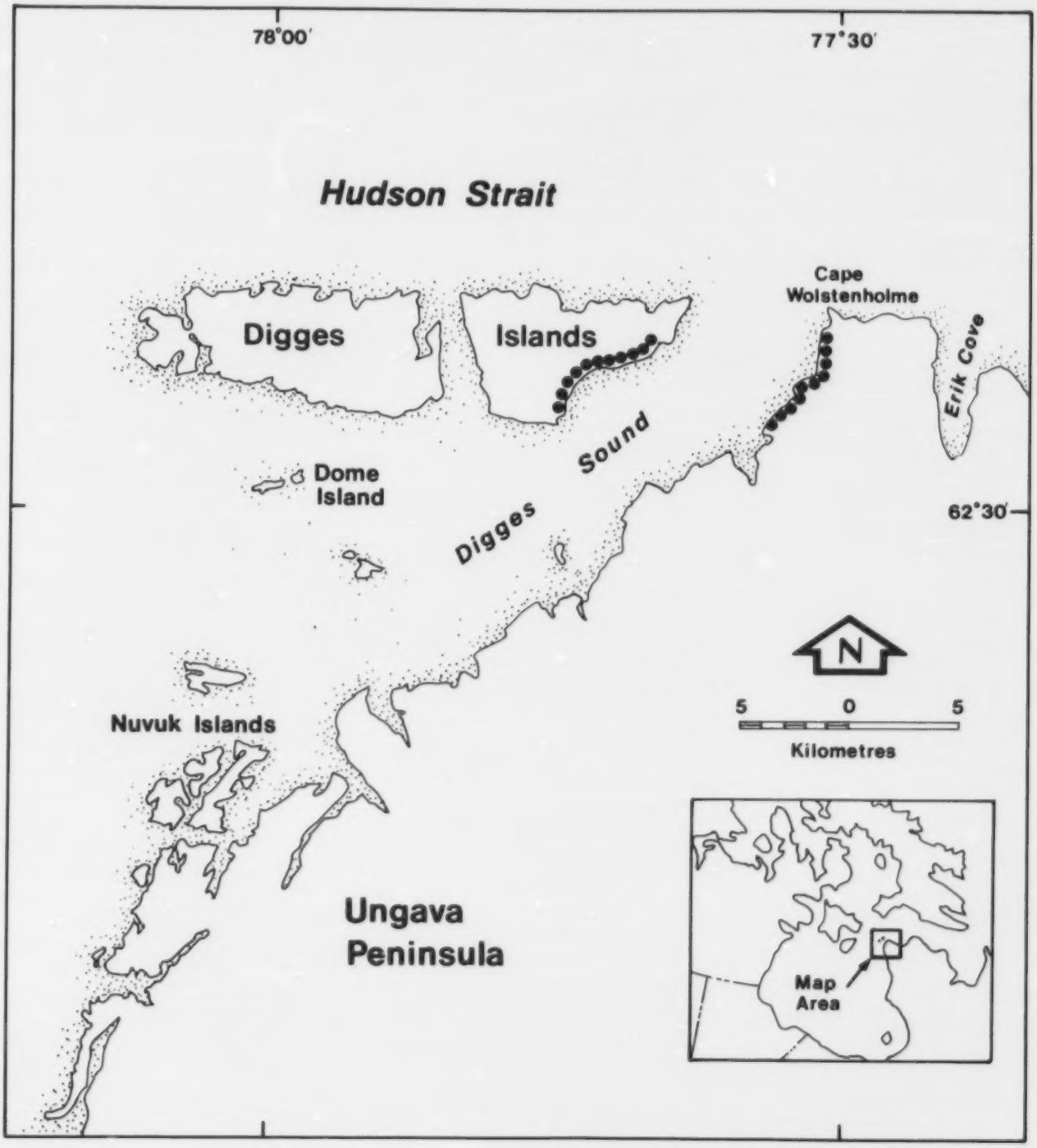
No special status.

References

Abraham, K.F.; Finney, G.H. 1986. Eiders of the eastern Canadian Arctic. Pages 55–73 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Gaston, A.J.; Decker, R.; Cooch, F.G.; Reed, A. 1986. The distribution of larger species of birds breeding on the coasts of Foxe Basin and northern Hudson Bay, Canada. Arctic 39(4):285–296.

Nakashima, D.J. 1986. Inuit knowledge of the ecology of the Common Eider in northern Quebec. Pages 102–113 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.


78°00'
77°30'
Hudson Strait
Digges
Islands
Cape
Wolstenholme
Erik Cove
Dome
Island
Digges Sound
62°30'
N
5 0 5
Kilometres
Nuvuk Islands
Ungava
Peninsula
Map
Area

Site 64: Digges Sound

Location: 62°33′N, 77°35′W **Size: 12 km²**

Description

Digges Sound is located at the northeastern corner of Hudson Bay where it meets Hudson Strait. It is enclosed by the Digges Islands to the north and the mainland of Ungava Peninsula, Quebec, to the south. East Digges Island has cliffs along its southern coast that are over 200 m high. The cliffs on the mainland, 4 km south of Cape Wolstenholme, reach heights of over 300 m above sea level. The rock is a granitic schist, which fractures, forming stacks and ledges.

Biological value

The cliffs along Digges Sound support over 20% of the Canadian population of Thick-billed Murres, one of the largest colonies of this species in Canada (Nettleship 1980). More than 180 000 pairs of Thick-billed Murres breed in a colony extending 4 km along the southeast shore of East Digges Island. A second colony of over 107 000 pairs extends from Cape Wolstenholme, Quebec, southwest for 8 km (Gaston et al. 1985).

The murres arrive at the cliffs in late April or early May and depart with their young in late August. Foraging, particularly for Arctic cod, occurs over most of the water as far as 100 km from the colonies.

About 870 pairs of Black Guillemots also breed on islands in Digges Sound. Razorbills have been sighted in the area, but no evidence of nesting has been found (Gaston et al. 1985). A small number of Atlantic Puffins nest in a colony on Dome Island to the south of West Digges Island (Gaston et al. 1985). This is the only confirmed colony of this species in the Northwest Territories. Approximately 350 pairs of Kumlien's Gulls have also been noted in the area (A. Gaston, pers. commun.).

Polar bears, seals, walruses, and white whales also inhabit the surrounding area.

Sensitivities

Colonial nesting seabirds are sensitive to disturbance and pollution of their marine foraging areas.

Potential conflicts

None.

Status of Key Habitat Site

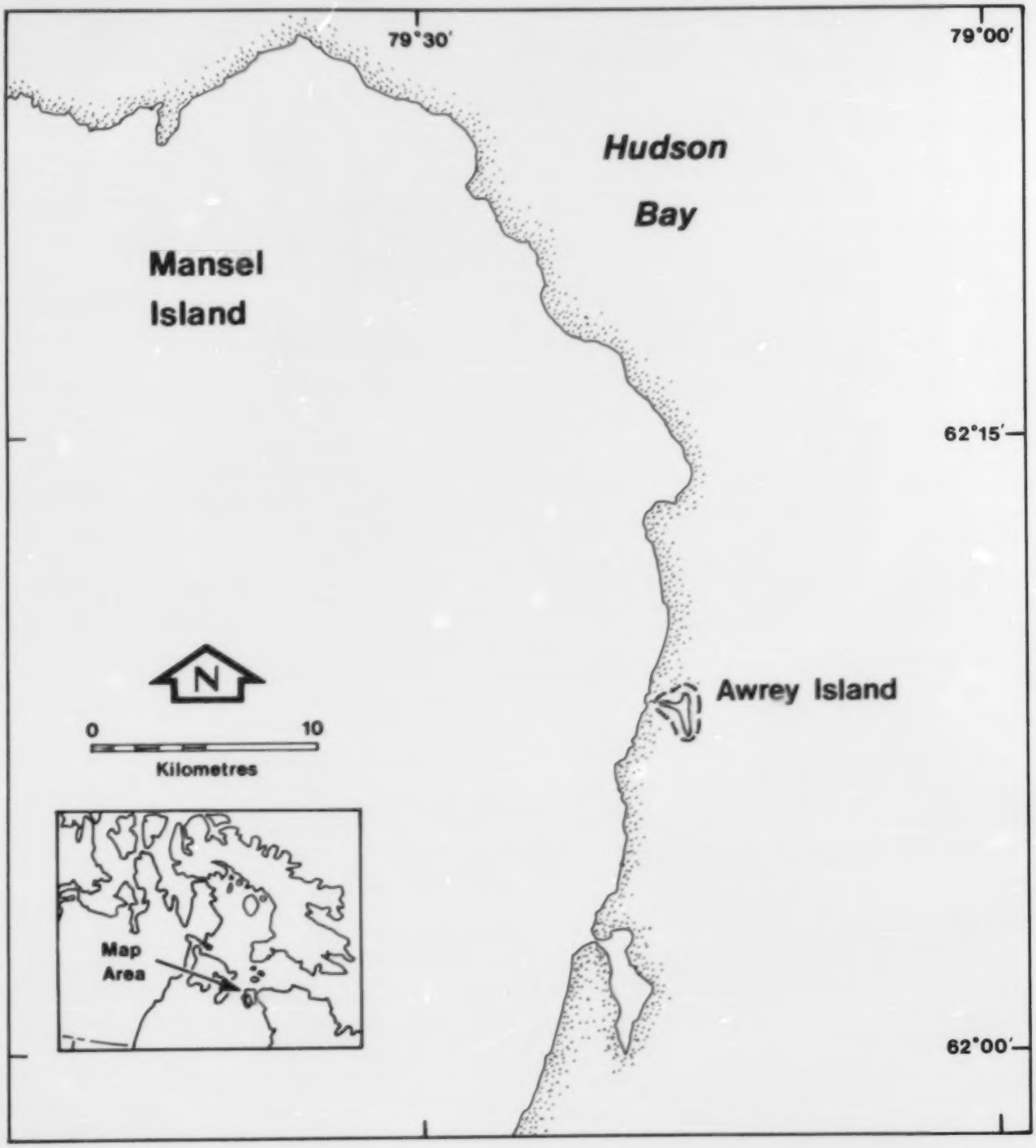
IBP Site.

References

Gaston, A.J.; Mallone, M. 1980. Range extension of Atlantic Puffin and Razorbill in Hudson Strait. Can. Field-Nat. 94(3):328–329.

Gaston, A.J.; Cairns, D.K.; Elliot, R.D.; Noble, D.G. 1985. A natural history of Digges Sound. Rep. Ser. No. 46, Can. Wildl. Serv. 63 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.


79°30'
79°00'
Hudson
Bay
Mansel
Island
62°15'
Awrey Island
N
0
10
Kilometres
Map
Area
62°00'

Site 65: Awrey Island

Location: 62°08′N, 79°15′W **Size: 1 km²**

Description

Awrey Island lies off the east coast of Mansel Island at the northeast entrance to Hudson Bay. Awrey Island, like the coast of Mansel Island, consists of low-lying tundra associated with land that has emerged from the sea over the past 2000 years (Gaston et al. 1986).

Biological value

Awrey Island provides habitat for up to 1000 pairs of nesting Common Eiders (Gaston et al. 1986) (presumably the northern subspecies *borealis*; Abraham and Finney 1986), which represents just over 1% of the national population. Such large concentrations of Northern Common Eiders are rare.

Based on studies in Ungava Bay, the eiders migrate into the area in late May; by early June, with the breakup of ice around the nesting islands, they have moved onto the colonies and initiated nesting. Laying of replacement clutches may continue into late July. Once the clutch has been laid and incubation begins, the males likely leave the islands and moult elsewhere. Ducklings hatch throughout July and early August; shortly thereafter, the females and ducklings likely leave the nesting island (Nakashima 1986).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution, particularly hydrocarbons, in the surrounding marine environment may be detrimental to the eiders.

Potential conflicts

None.

Status of Key Habitat Site

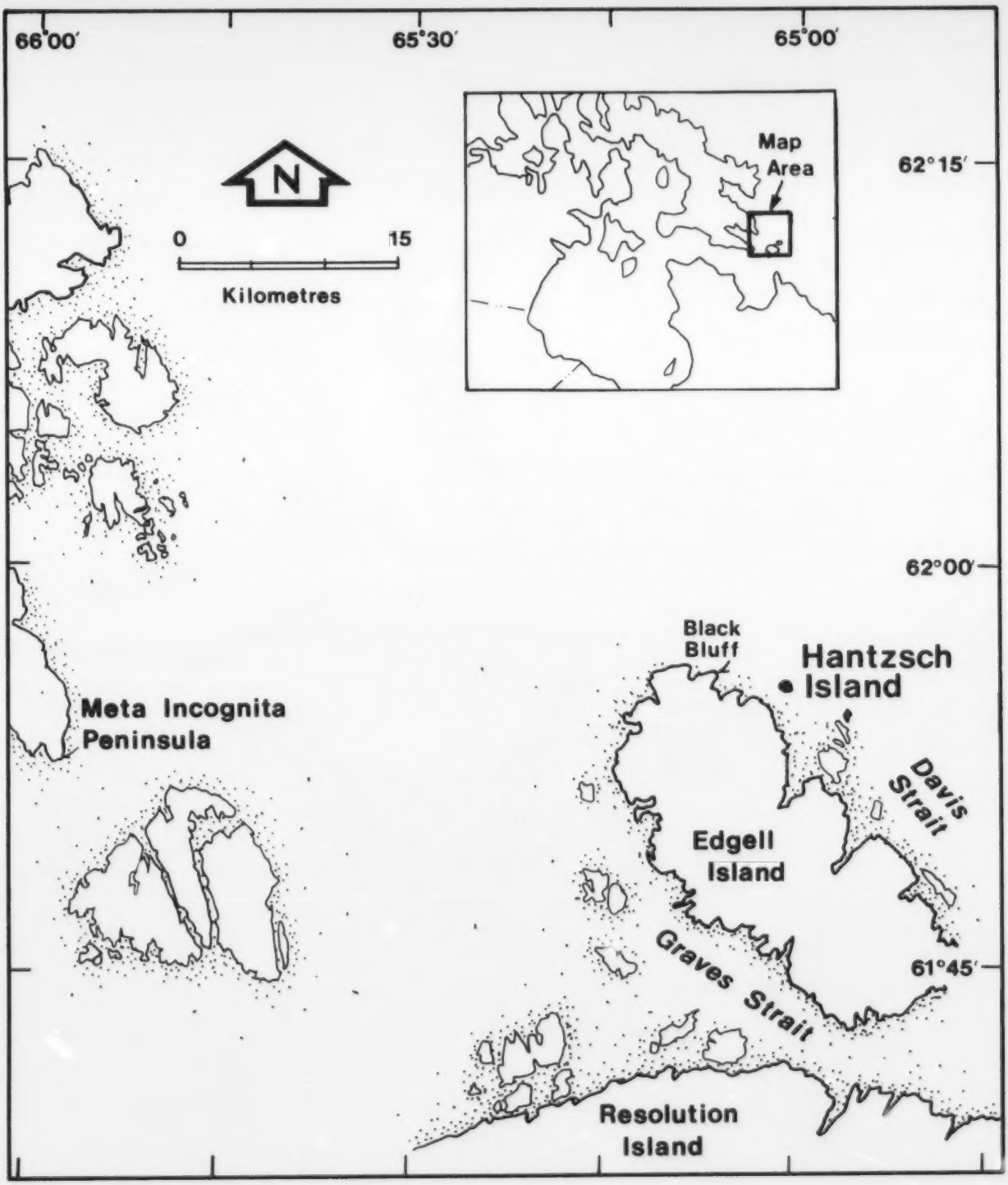
No special status.

References

Abraham, K.F.; Finney, G.H. 1986. Eiders of the eastern Canadian Arctic. Pages 55–73 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Gaston, A.J.; Decker, R.; Cooch, F.G.; Reed, A. 1986. The distribution of larger species of birds breeding on the coasts of Foxe Basin and northern Hudson Bay, Canada. Arctic 39(4):285–296.

Nakashima, D.J. 1986. Inuit knowledge of the ecology of the Common Eider in northern Quebec. Pages 102–113 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.


66°00′
65°30′
65°00′
62°15′
62°00′
61°45′
N
0
15
Kilometres
Map
Area
Meta Incognita
Peninsula
Black
Bluff
Hantzsch
Island
Davis
Strait
Edgell
Island
Graves Strait
Resolution
Island

Site 66: Hantzsch Island

Location: 61°56′N, 65°01′W **Size: 1 km²**

Description

Hantzsch Island is the unofficial name for the small island 1 km off the northeastern shore of Edgell Island, at the southeasternmost tip of Baffin Island. It is a dome-shaped island, less than 1 km in diameter, with a maximum elevation of 150 m. The rugged coastline of steep cliffs is of Precambrian granitic gneiss with grassy slopes and summits (Douglas 1970).

A polynya occurs in Frobisher Bay just north of Hantzsch Island (Stirling and Cleator 1981).

Biological value

An estimated 50 000 pairs of Thick-billed Murres (representing approximately 3% of the Canadian population) and 5000 pairs of Black-legged Kittiwakes (representing over 2% of the Canadian population) nest on the cliffs of this island. Small numbers of Glaucous Gulls and possibly Northern Fulmars also nest on the island (Gaston 1983). The seabirds occupy the area from early May to late August or September.

The polynya in Frobisher Bay attracts bearded, ringed, and harp seals, walruses, and white whales (Stirling and Cleator 1981). Polar bears also inhabit the area and use the seaward tip of Meta Incognita Peninsula as a maternity denning area (Stirling et al. 1980).

Sensitivities

Seabirds are sensitive to disturbance and pollution of their marine foraging areas.

Potential conflicts

Shipping and air traffic through Frobisher Bay and Hudson Strait and hydrocarbon exploration in Davis Strait could cause disturbance and marine pollution.

Status of Key Habitat Site

IBP Site.

References

Douglas, R.J.W. (ed.). 1970. Geology and economic minerals of Canada. Econ. Geol. Rep. No. 1, Geol. Surv. Can., Ottawa. 838 pp.

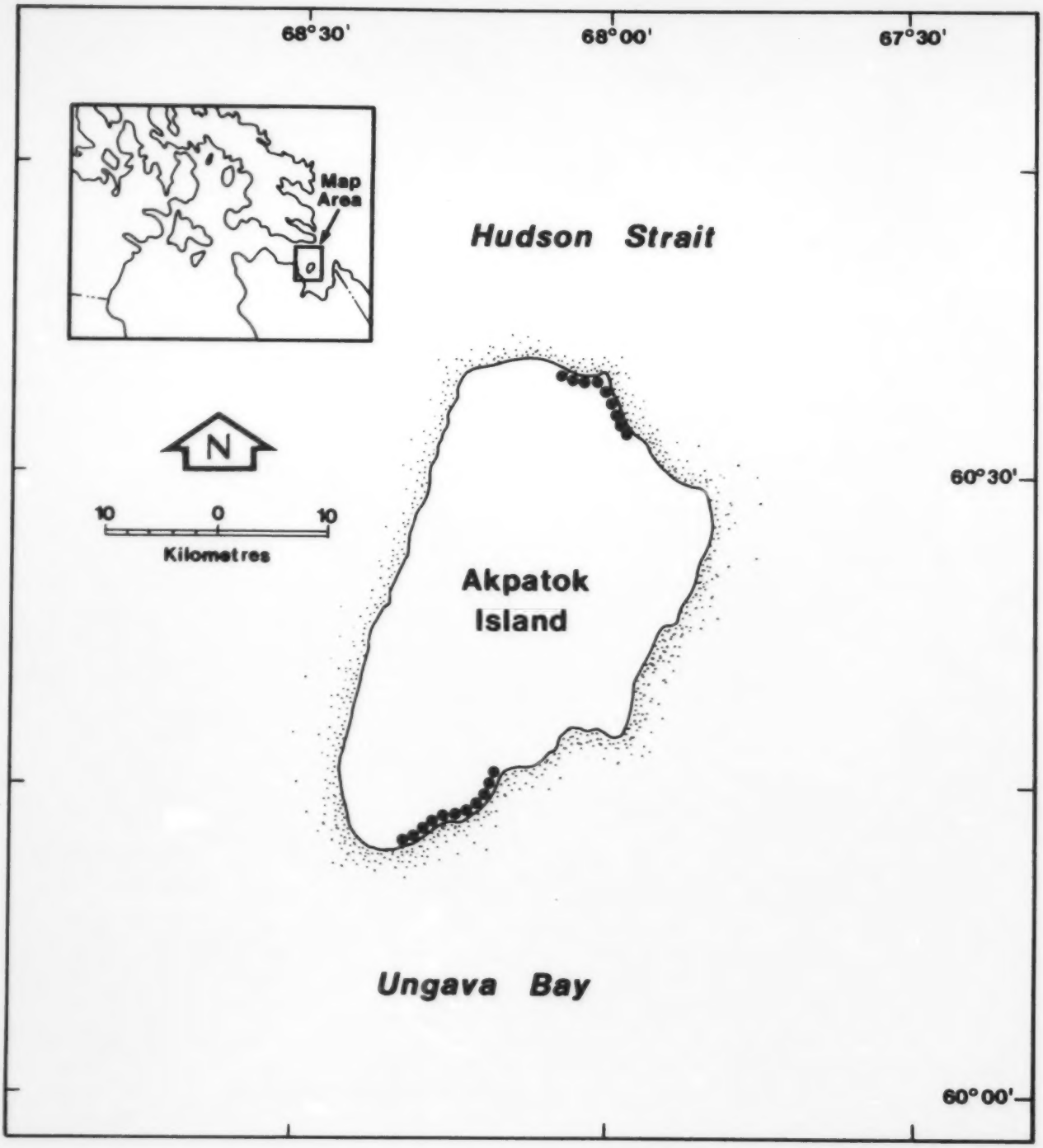
Gaston, A.J. 1983. Seabird studies on Hantzsch Island, S.E. Baffin Island, NWT. Unpubl. rep., Can. Wildl. Serv., Ottawa. 42 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.

Stirling, I.; Cleator, H. (eds.). 1981. Polynyas in the Canadian Arctic. Occas. Pap. No. 45, Can. Wildl. Serv., Ottawa. 70 pp.

Stirling, I.; Calvert, W.; Andriashek, D. 1980. Population ecology studies of the Polar Bear in the area of southeastern Baffin Island. Occas. Pap. No. 44, Can. Wildl. Serv., Ottawa. 31 pp.

Site 67: Akpatok Island



Site 67: Akpatok Island

Location: 60°25′N, 68°08′W **Size: 32 km²**

Description

Akpatok Island is located in northwestern Ungava Bay, about 65 km offshore from the mainland of Quebec. This flat-topped island is surrounded by steep cliffs that rise over 245 m above the sea. It is composed mainly of Ordovician limestone and vegetated by sparse upland tundra.

Biological value

Two large colonies of Thick-billed Murres are located on the north and southeast coasts of the island. The colonies occur on horizontal ledges that begin on the cliff faces approximately 30 m above sea level. The northern colony extends for 14 km along the cliff face and had an estimated 173 000 breeding pairs in 1983. The southern colony extends for 15 km and harboured approximately 120 000 pairs of murres in 1982. Both estimates are believed to be low, and the total number of breeding pairs is probably between 300 000 and 400 000 (Chapdelaine et al. 1986). At over 20% of the Canadian population, these two colonies constitute one of the largest Thick-billed Murre concentrations in Canada. Thick-billed Murres arrive at their nesting cliffs in early May and set out to sea, with their young, at the end of August.

Approximately 300 to 500 pairs of Black Guillemots nest along most of the island's coast. Several pairs of Peregrine Falcons and Gyrfalcons probably breed on the island (A. Gaston, pers. commun.).

Marine mammals, especially walruses and seals, inhabit the surrounding waters during the summer. The island is an important summer retreat and possible maternity denning area for polar bears in the Ungava Bay, Labrador, and Hudson Strait area (Smith et al. 1975).

Sensitivities

Murres are sensitive to disturbance and pollution of marine foraging areas.

Potential conflict

None.

Status of Key Habitat Site

IBP Site.

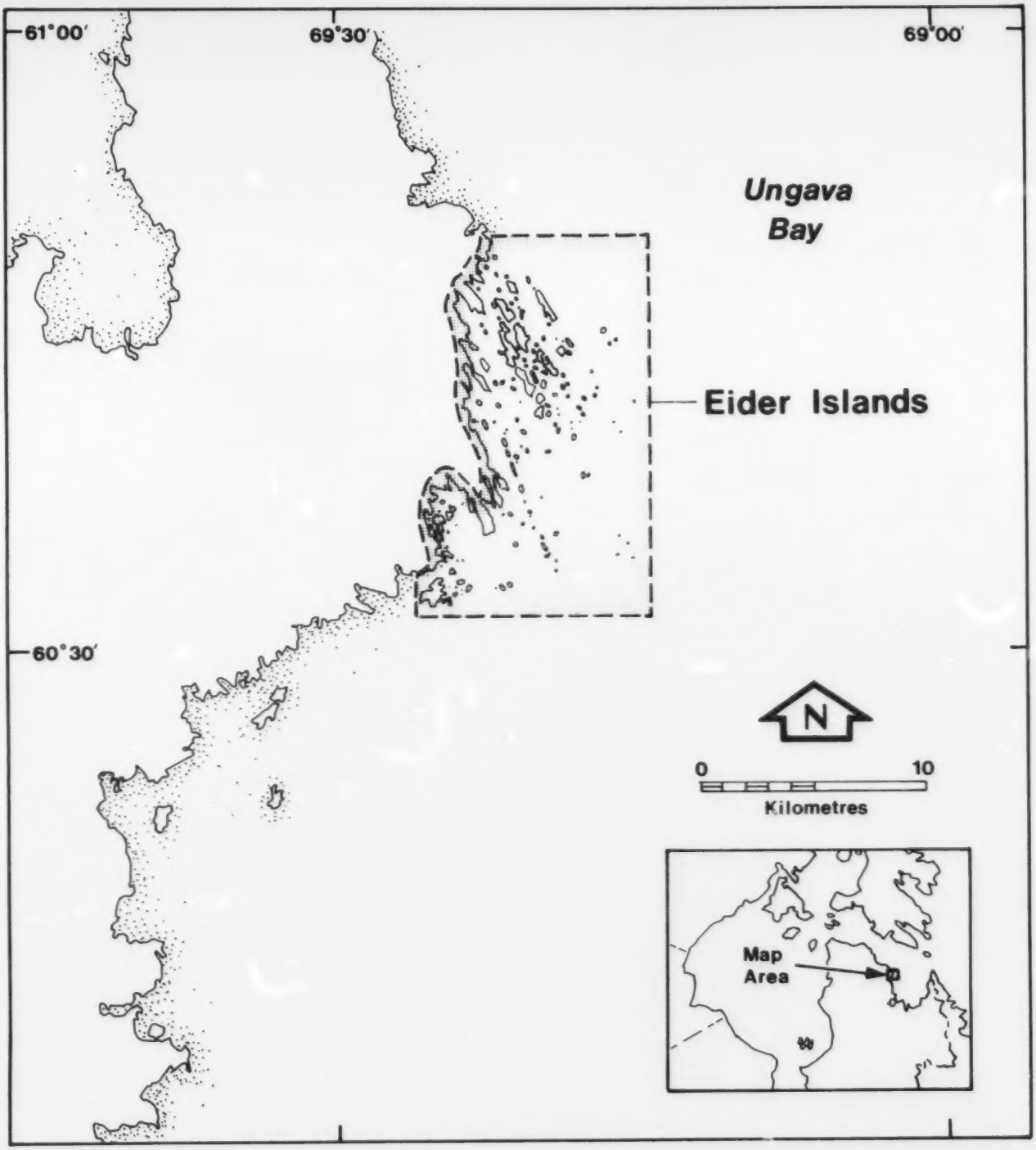
References

Chapdelaine, G.; Gaston, A.J.; Brousseau, P. 1986. Censusing the Thick-billed Murre colonies of Akpatok Island, NWT. Prog. Note No. 163, Can. Wildl. Serv., Ottawa. 9 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. rep., Can. Wildl. Serv., Ottawa. 133 pp.

Smith, P.A.; Stirling, I.; Jonkel, C.; Juniper, I. 1975. Notes on the present status of the polar bear (*Ursus maritimus*) in Ungava Bay and northern Labrador. Prog. Note No. 53, Can. Wildl. Serv., Ottawa. 8 pp.

Tuck, L.M. 1960. The murres: their distribution, populations, and biology. A study of the genus *Uria*. Monogr. Ser. No. 1, Can. Wildl. Serv., Ottawa. 260 pp.


61°00'
69°30'
69°00'
Ungava
Bay
Eider Islands
60°30'
N
0
10
Kilometres
Map
Area

Site 68: Eider Islands

Location: 60°50′N, 69°20′W **Size: 72 km²**

Description

The 172 Eider Islands form a small archipelago off the north end of the west side of Ungava Bay, approximately 20 km southeast of the community of Quaqtaq. All offshore islands and reefs in this area are within the Northwest Territories.

The islands lie within the Canadian Shield and are characterized by granitic–gneiss bedrock thinly overlain by soil. The vegetation is composed of tundra species, primarily Arctic willow, crowberry, sedges, lichens, and mosses (Chapdelaine et al. 1986). Ice in combination with strong tidal action results in extensive bare rock around the margins of the islands. The tidal range can reach 14–16 m in Ungava Bay (Dunbar 1958).

Biological value

Seven archipelagos in Ungava Bay provide nesting habitat for over 19% of the Northern Common Eiders (subspecies *borealis*) in Canada. Many other Northern Common Eiders nest scattered along the coast of Ungava Bay and comprise about 30% of the Canadian population. In 1980, the Eider Islands had an estimated 4100 nesting pairs (over 4% of the national population), an average of 24.5 nests per island (Chapdelaine et al. 1986).

The eiders migrate into the area in late May; by early June, with the breakup of ice around the nesting islands, they have moved onto the colonies and initiated nesting. Laying of replacement clutches may continue into late July. Once the clutch has been laid and incubation begins, the males leave, flying over 60 km west to coastal moulting areas. Ducklings hatch throughout July and early August; shortly thereafter, the females and ducklings leave the nesting islands for sheltered bays and estuaries (Nakashima 1986).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution, particularly hydrocarbons, in the surrounding marine environment may be detrimental to the eiders.

Potential conflicts

Inuit from nearby communities hunt and gather small numbers of birds and eggs from this area, but their impacts on the population are probably negligible. The nesting population is believed to be stable (Reed 1986).

Status of Key Habitat Site

No special status.

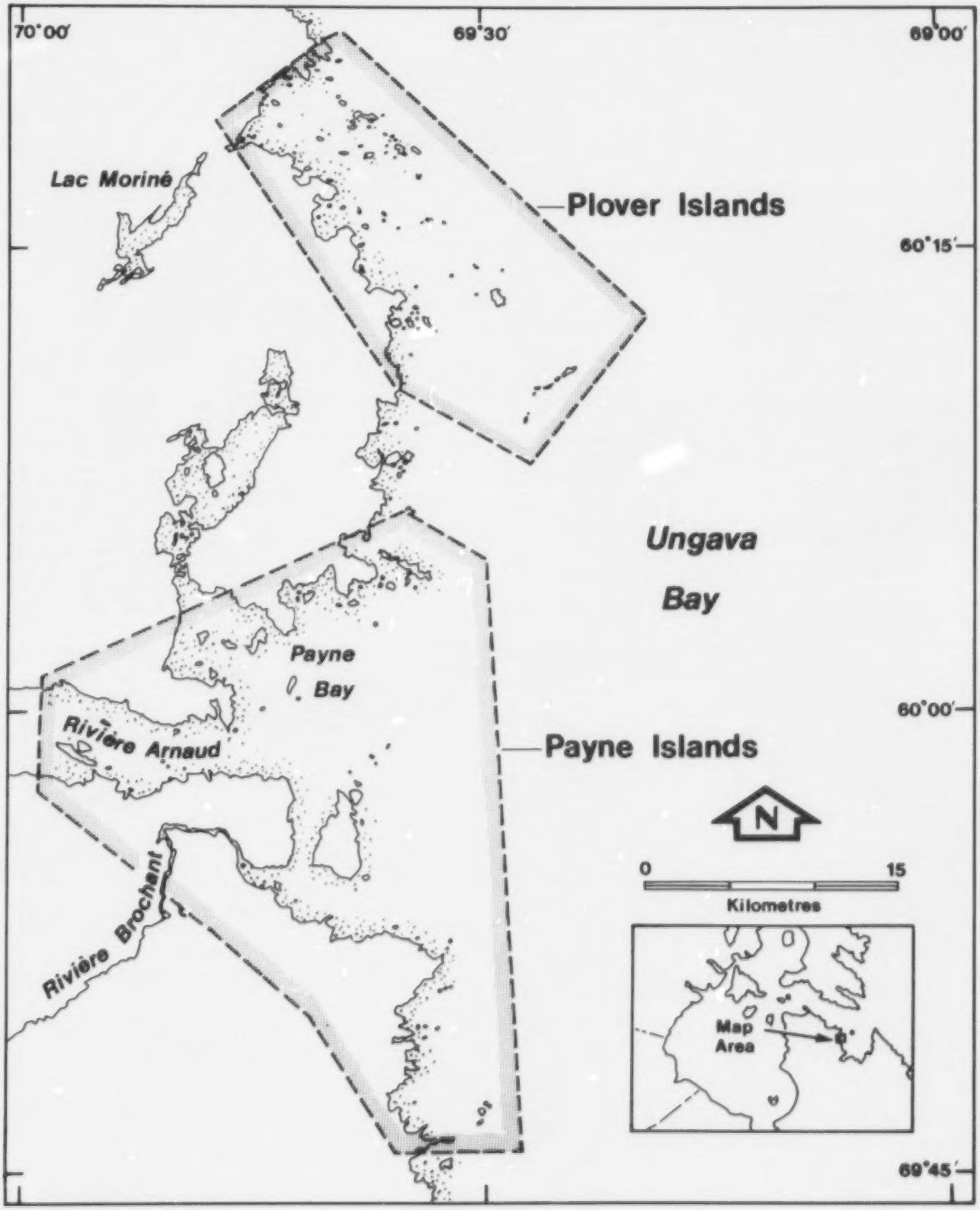
References

Chapdelaine, G.; Bourget, A.; Kemp, W.B.; Nakashima, D.J.; Murray, D.J. 1986. Population d'Eider à duvet près des côtes du Québec septentrional. Pages 39–50 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Dunbar, M.J. 1958. Physical oceanographic results of the Calanus expeditions on Ungava Bay, Frobisher, Cumberland Sound, Hudson Strait and Northern Hudson Bay, 1949–1955. J. Fish. Res. Board Can. 15:155–201.

Nakashima, D.J. 1986. Inuit knowledge of the ecology of the Common Eider in northern Quebec. Pages 102–113 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Reed, A. 1986. Eiderdown harvesting and other uses of Common Eiders in spring and summer. Pages 138–146 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.


70°00′
69°30′
69°00′
Lac Moriné
Plover Islands
60°15′
Ungava
Bay
Payne
Bay
Rivière Arnaud
Payne Islands
60°00′
Rivière Brochant
N
0
15
Kilometres
Map
Area
69°45′

Site 69: Plover and Payne Islands

Location: 60°10′N, 69°30′W **Size: 220 km²**

Description

The Plover and Payne islands (100 in total) form small archipelagos off the west side of Ungava Bay, just east of the community of Kangiqsuk (Bellin). All offshore islands and reefs in this area are part of the Northwest Territories.

The islands lie within the Canadian Shield and are characterized by granitic–gneiss bedrock thinly overlain by soil. The vegetation is composed of tundra species, primarily Arctic willow, crowberry, sedges, lichens, and mosses (Chapdelaine et al. 1986). Ice in combination with strong tidal action results in extensive bare rock around the margins of the islands. The tidal range can reach 14–16 m in Ungava Bay (Dunbar 1958).

Biological value

Seven archipelagos in Ungava Bay provide nesting habitat for over 19% of the Northern Common Eiders (subspecies *borealis*) in Canada. Many other Northern Common Eiders nest scattered along the coast of Ungava Bay and comprise 30% of the Canadian population. In 1980, the Plover and Payne islands had a nesting population of approximately 3500 pairs (nearly 4% of the national population), an average of 32.1 nests per island (Chapdelaine et al. 1986).

The eiders migrate into the area in late May; by early June, with the breakup of ice around the nesting islands, they have moved onto the colonies and initiated nesting. Laying of replacement clutches may continue into late July. Once the clutch has been laid and incubation begins, the males leave the islands and moult elsewhere. Ducklings hatch throughout July and early August; shortly thereafter, the females and ducklings leave the nesting islands for sheltered bays and estuaries (Nakashima 1986).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution, particularly hydrocarbons, in the surrounding marine environment may be detrimental to the eiders.

Potential conflicts

Inuit from nearby communities hunt and gather small numbers of birds and eggs from this area, but the impacts on the population are probably minimal. The nesting population is believed to be stable (Reed 1986).

Status of Key Habitat Site

No special status.

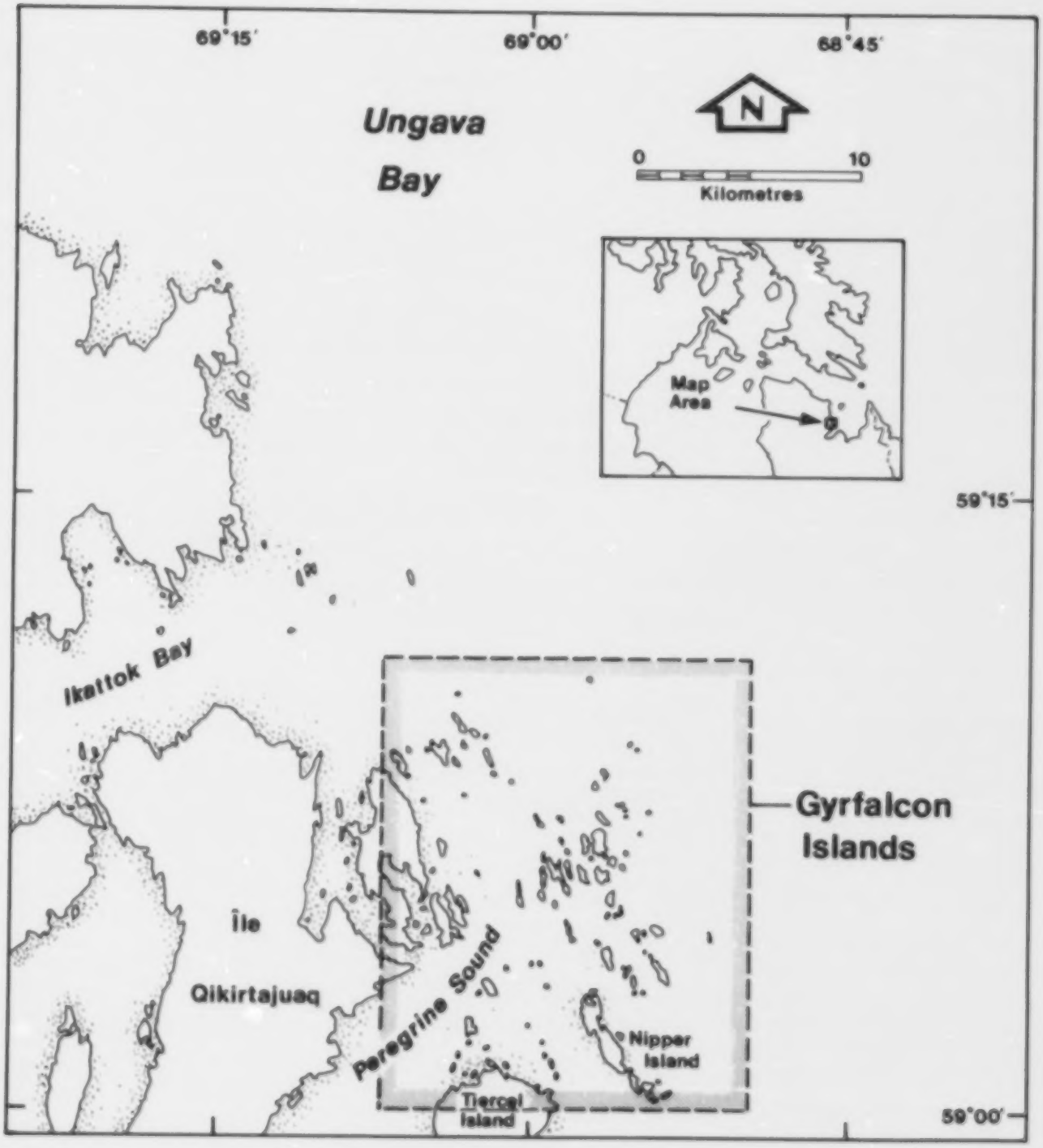
References

Chapdelaine, G.; Bourget, A.; Kemp, W.B.; Nakashima, D.J.; Murray, D.J. 1986. Population d'Eider à duvet près des côtes du Québec septentrional. Pages 39–50 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Dunbar, M.J. 1958. Physical oceanographic results of the Calanus expeditions on Ungava Bay, Frobisher, Cumberland Sound, Hudson Strait and Northern Hudson Bay, 1949–1955. J. Fish. Res. Board Can. 15:155–201.

Nakashima, D.J. 1986. Inuit knowledge of the ecology of the Common Eider in northern Quebec. Pages 102–113 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Reed, A. 1986. Eiderdown harvesting and other uses of Common Eiders in spring and summer. Pages 138–146 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.


69°15′
69°00′
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Ungava
Bay
N
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Kilometres
Map
Area
59°15′
Ikattok Bay
Gyrfalcon
Islands
Île
Qikirtajuaq
Peregrine Sound
Nipper
Island
Tiercel
Island
59°00′

Site 70: Gyrfalcon Islands

Location: 59°06′N, 68°58′W **Size: 150 km²**

Description

The 201 Gyrfalcon Islands form small archipelagos off the southwest side of Ungava Bay, about 120 km northwest of Kuujjuaq (Fort Chimo). All offshore islands and reefs in this area are within the Northwest Territories.

The islands lie within the Canadian Shield and are characterized by granitic–gneiss bedrock thinly overlain by soil. The vegetation is composed of tundra species, primarily Arctic willow, crowberry, sedges, lichens, and mosses (Chapdelaine et al. 1986). Ice in combination with strong tidal action results in extensive bare rock around the margins of the islands. The tidal range can reach 14–16 m in Ungava Bay (Dunbar 1958).

Biological value

Seven archipelagos in Ungava Bay provide nesting habitat for over 19% of the Northern Common Eiders (subspecies *borealis*) in Canada. Many other Northern Common Eiders nest scattered along the coast of Ungava Bay and comprise 30% of the Canadian population. The Gyrfalcon Islands had a nesting population of about 3600 pairs in 1980, an average of 18.0 nests per island (Chapdelaine et al. 1986). This represents nearly 4% of the national population.

The eiders migrate into the area in late May; by early June, with the breakup of ice around the nesting islands, they have moved onto the colonies and initiated nesting. Laying of replacement clutches may continue into late July. Once the clutch has been laid and incubation begins, the males leave the islands and moult elsewhere. Ducklings hatch throughout July and early August; shortly thereafter, the females and ducklings leave the nesting islands for sheltered bays and estuaries (Nakashima 1986).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution, particularly hydrocarbons, in the surrounding marine environment may be detrimental to the eiders.

Potential conflicts

Inuit from nearby communities hunt and gather small numbers of birds and eggs from this area, but the impacts on the population are probably minimal. The nesting population is believed to be stable (Reed 1986).

Status of Key Habitat Site

No special status.

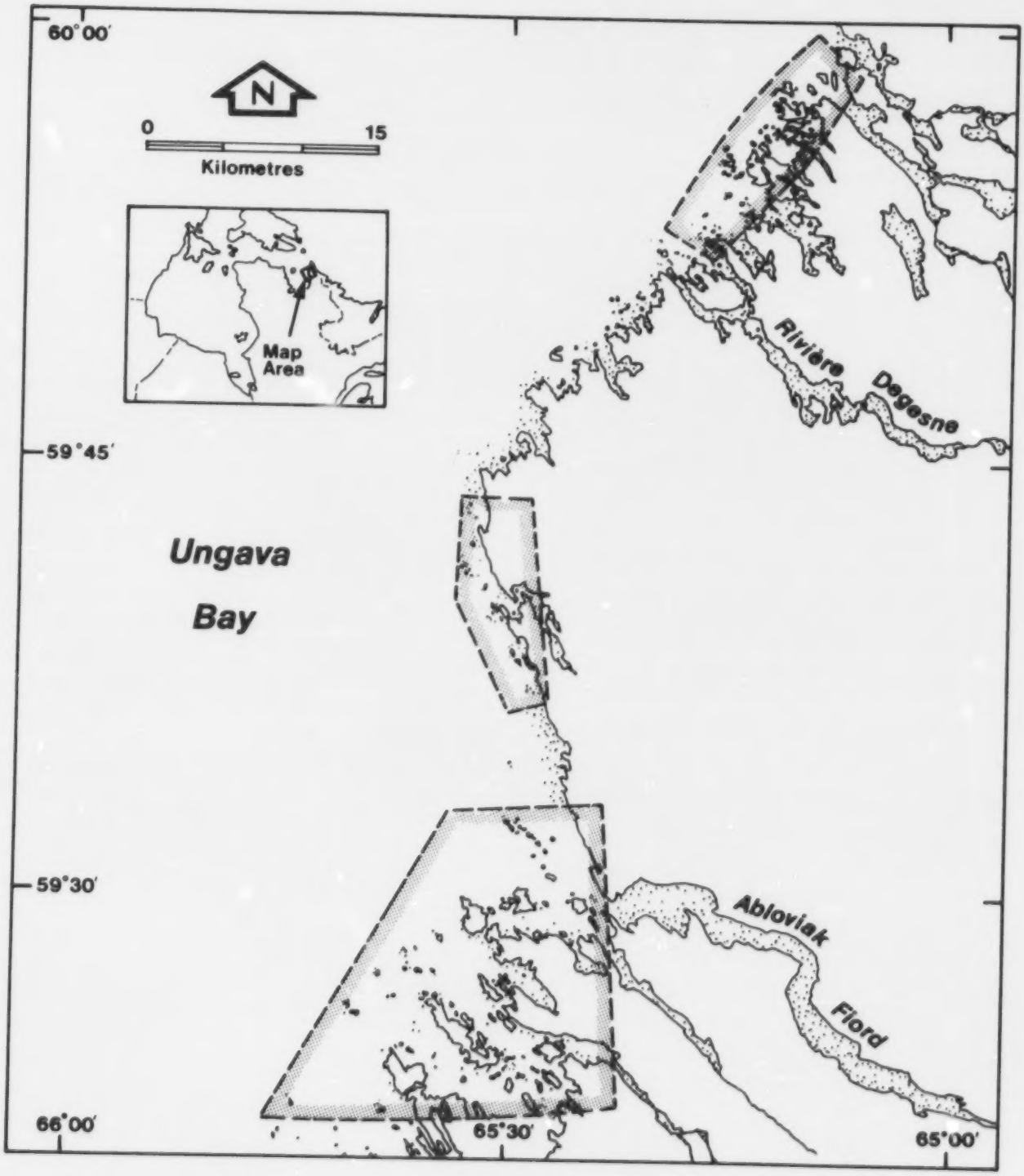
References

Chapdelaine, G.; Bourget, A.; Kemp, W.B.; Nakashima, D.J.; Murray, D.J. 1986. Population d'Eider à duvet près des côtes du Québec septentrional. Pages 39–50 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Dunbar, M.J. 1958. Physical oceanographic results of the Calanus expeditions on Ungava Bay, Frobisher, Cumberland Sound, Hudson Strait and Northern Hudson Bay, 1949–1955. J. Fish. Res. Board Can. 15:155–201.

Nakashima, D.J. 1986. Inuit knowledge of the ecology of the Common Eider in northern Quebec. Pages 102–113 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Reed, A. 1986. Eiderdown harvesting and other uses of Common Eiders in spring and summer. Pages 138–146 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.


60°00′
N
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15
Kilometres
Map Area
59°45′
Ungava Bay
59°30′
Rivière Dagesne
Abloviak Fiord
66°00′
65°30′
65°00′

Site 71: Northeast Ungava Bay

Location: 59°40′N, 65°30′W **Size: 225 km²**

Description

This area consists of three small archipelagos (589 islands in total) along the northeast coast of Ungava Bay, about 80 km south of the abandoned community of Port Burwell. All offshore islands and reefs in this area are part of the Northwest Territories.

The islands lie within the Canadian Shield and are characterized by granitic–gneiss bedrock thinly overlain by soil. The island vegetation is composed of tundra species, primarily Arctic willow, crowberry, sedges, lichens, and mosses (Chapdelaine et al. 1986). Ice in combination with strong tidal action results in extensive bare rock around the margins of the islands. The tidal range can reach 14–16 m in Ungava Bay (Dunbar 1958).

Biological value

Seven archipelagos in Ungava Bay provide nesting habitat for over 19% of the Northern Common Eiders (subspecies *borealis*) in Canada. Many other Northern Common Eiders nest scattered along the coast of Ungava Bay and comprise 30% of the Canadian population. The three archipelagos on the northeast coast of Ungava Bay had a nesting population of about 6700 pairs in 1980, an average of 12.4 nests per island (Chapdelaine et al. 1986). This represents over 7% of the national population.

The eiders migrate into the area in late May; by early June, with the breakup of ice around the nesting islands, they have moved onto the colonies and initiated nesting. Laying of replacement clutches may continue into late July. Once the clutch has been laid and incubation begins, the males leave the islands and moult elsewhere. Ducklings hatch throughout July and early August; shortly thereafter, the females and ducklings leave the nesting islands for sheltered bays and estuaries (Nakashima 1986).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution, particularly hydrocarbons, in the surrounding marine environment may be detrimental to the eiders.

Potential conflicts

Inuit from nearby communities gather a substantial number of eggs from this area, but the impact on the population appears to be negligible. The nesting population is believed to be stable (Reed 1986).

Status of Key Habitat Site

No special status.

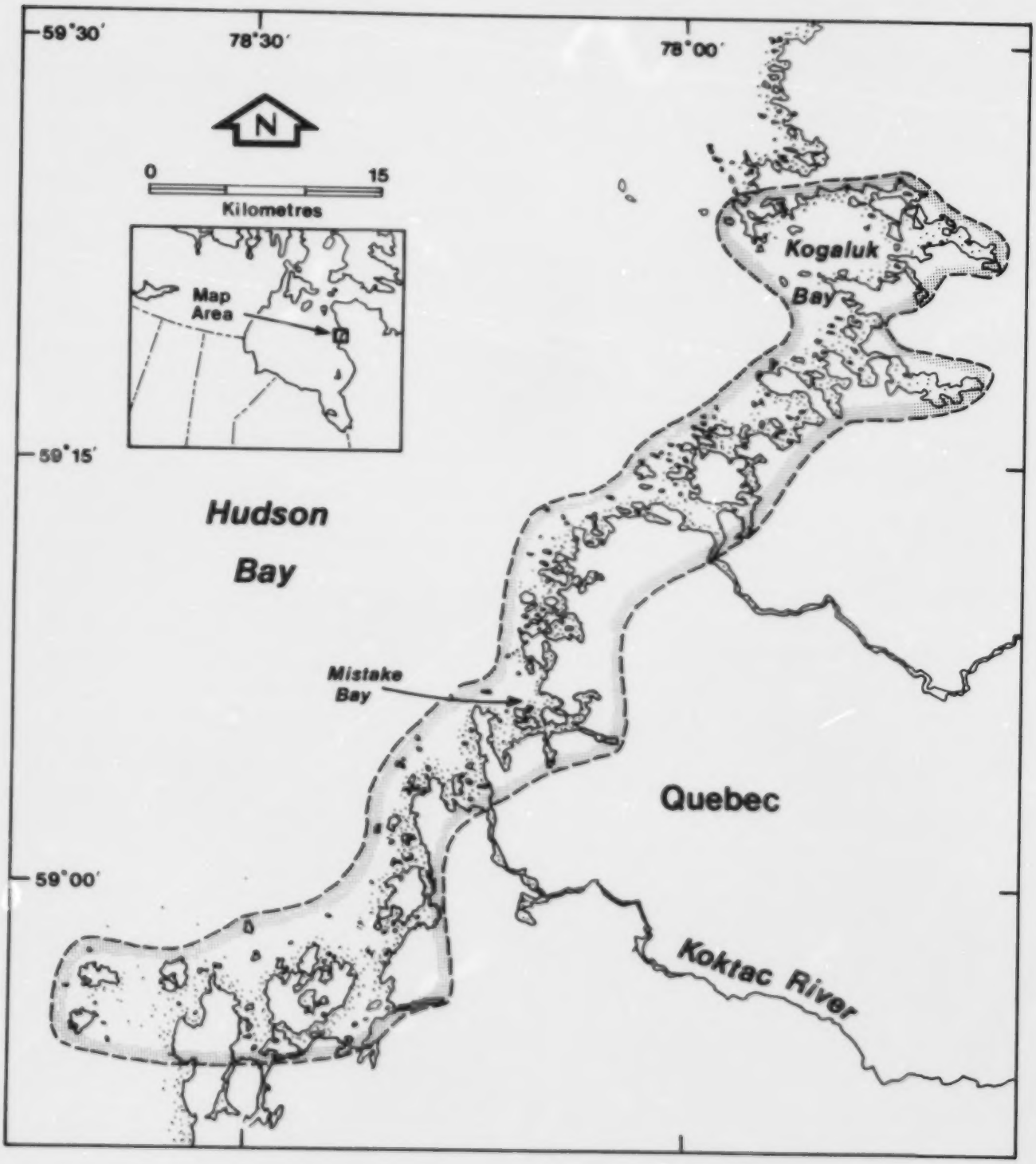
References

Chapdelaine, G.; Bourget, A.; Kemp, W.B.; Nakashima, D.J.; Murray, D.J. 1986. Population d'Eider à duvet près des côtes du Québec septentrional. Pages 39–50 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Dunbar, M.J. 1958. Physical oceanographic results of the Calanus expeditions on Ungava Bay, Frobisher, Cumberland Sound, Hudson Strait and Northern Hudson Bay, 1949–1955. J. Fish. Res. Board Can. 15:155–201.

Nakashima, D.J. 1986. Inuit knowledge of the ecology of the Common Eider in northern Quebec. Pages 102–113 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Reed, A. 1986. Eiderdown harvesting and other uses of Common Eiders in spring and summer. Pages 138–146 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.


59°30′
78°30′
78°00′
N
0
15
Kilometres
Map Area
Kogaluk Bay
59°15′
Hudson Bay
Mistake Bay
Quebec
59°00′
Koktac River

Site 72: Koktac River Archipelago

Location: 59°15′N, 78°00′W **Size: 530 km²**

Description

This area extends along 70 km of the Quebec coastline of Hudson Bay between the communities of Inukjuak and Povungnituk. All offshore islands and reefs in this area are part of the Northwest Territories.

There are 768 islands in the area; two of the islands are greater than 500 ha in size. Most of the remaining islands are less than 50 ha (Nakashima and Murray 1988).

Biological value

In 1985, an estimated 2300 pairs of Hudson Bay Common Eiders (subspecies *sedentaria*) nested on small islands in this area (Nakashima and Murray 1988). This represents 5% of the national population. In their survey, which covered half the small islands, Nakashima and Murray recorded 80% of the nests on 15% of the islands. Colonies were distributed throughout the site. Approximately 200 nests were on islands in the foreshore flats.

Many Hudson Bay Common Eiders winter along the western land-fast ice edge northwest of the Belcher Islands (see Key Habitat Site 74) and Sleeper Islands (see Key Habitat Site 73) and, to a much lesser extent, on polynyas around the Belcher Islands (Freeman 1970; Nakashima and Murray 1988). Concentrations of wintering birds are very unusual in the Northwest Territories. In spring, eiders disperse as open water becomes available elsewhere; islands at the edges of archipelagos tend to be the first ice-free nesting areas. Eiders at the Koktac River initiate nesting in the third and fourth weeks of June, and the eggs hatch in late July, shortly after which families disperse from the nesting islands.

About 870 pairs of Arctic Terns and 160 pairs of Glaucous and Herring gulls nested on islands in the archipelago in 1985, usually in association with Common Eiders (Nakashima and Murray 1988).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution in the surrounding marine environment would be detrimental to the eiders.

Potential conflicts

Oil exploration in central Hudson Bay is a potential source of pollution. Prevailing west and northwest winds render the east coast of the bay most susceptible to oil damage (Davidson 1985, cited in Nakashima and Murray 1988).

Status of Key Habitat Site

No special status.

References

Abraham, K.F.; Finney, G.H. 1986. Eiders of the eastern Canadian Arctic. Pages 55–73 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

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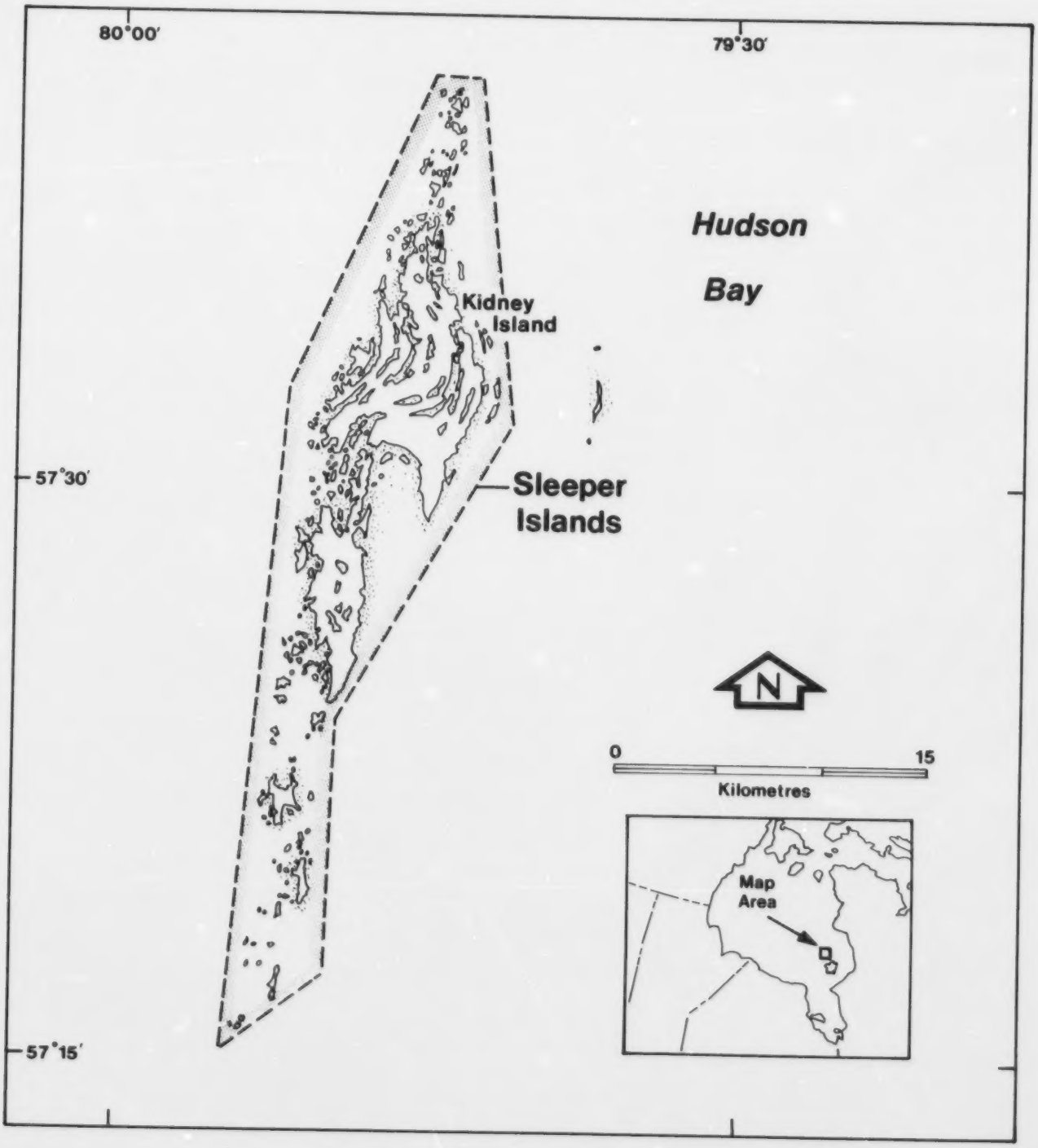
Freeman, M.M.R. 1970. Observations on the seasonal behaviour of the Hudson Bay Eider (*Somateria mollissima sedentaria*). Can. Field-Nat. 84:145–153.

Nakashima, D.J.; Murray, D.J. 1988. The Common Eider (*Somateria mollissima sedentaria*) of eastern Hudson Bay: A survey of nest colonies and Inuit ecological knowledge. Environ. Stud. Revolving Funds Rep. No. 102, Ottawa. 174 pp.


80°00′
79°30′
Hudson
Bay
Kidney
Island
57°30′
Sleeper
Islands
N
0
15
Kilometres
Map
Area
57°15′

Site 73: Sleeper Islands

Location: 57°30′N, 79°45′W **Size: 226 km²**

Description

The Sleeper Islands (Qumiutuq) archipelago is situated in Hudson Bay about 115 km north–northeast of the community of Sanikiluaq. The archipelago stretches about 49 km north to south and consists of over 360 islands plus numerous reefs and shoals. Most of the islands are less than 50 ha, but two are greater than 1000 ha. Most islands consist mainly of exposed, smooth bedrock. Vegetation is restricted to depressions in the bedrock and is more abundant on the larger islands (Nakashima and Murray 1988).

Less than 100 years ago, Inuit occupied the Sleeper Islands year-round. Man-made stone rings still surround old and active nest cups on many of the islands. These structures limited the females' access to their nests and facilitated the trapping of birds for food. The archipelago is now visited infrequently by Inuit (Nakashima and Murray 1988).

Biological value

In 1985, an estimated 5900 pairs of Hudson Bay Common Eiders (subspecies *sedentaria*) nested on small islands in this area (Nakashima and Murray 1988). This represents 14% of the national population. Not all islands were inhabited by the eiders; in their survey, which covered half the islands, Nakashima and Murray recorded 90% of the nests on 8% of the islands. The more isolated and exposed islands around the perimeter of the archipelago were the preferred sites. These islands were likely free of ice earlier in the season than more central islands. The eiders also preferred islands with large, flat, well-vegetated areas.

Many Hudson Bay Common Eiders winter along the western land-fast ice edge northwest of the Belcher Islands (see Key Habitat Site 74) and Sleeper Islands and, to a much lesser extent, on polynyas around the Belcher Islands (Freeman 1970; Nakashima and Murray 1988). Concentrations of wintering birds are very unusual in the Northwest Territories. In spring, eiders disperse as open water becomes available elsewhere; islands at the edges of archipelagos tend to be the first ice-free nesting areas. Eiders at the Sleeper Islands initiate nesting in the second and third weeks of June, and the eggs hatch in July, shortly after which families disperse from the nesting islands.

About 1600 pairs of Arctic Terns and 200 pairs of Glaucous and Herring gulls nested on islands in the archipelago in 1985, usually in association with Common Eiders (Nakashima and Murray 1988).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution in the surrounding marine environment would be detrimental to the eiders.

Potential conflicts

Oil exploration in central Hudson Bay is a potential source of pollution. Prevailing west and northwest winds render the east coast of the bay most susceptible to oil damage (Davidson 1985, cited in Nakashima and Murray 1988).

Status of Key Habitat Site

No special status.

References

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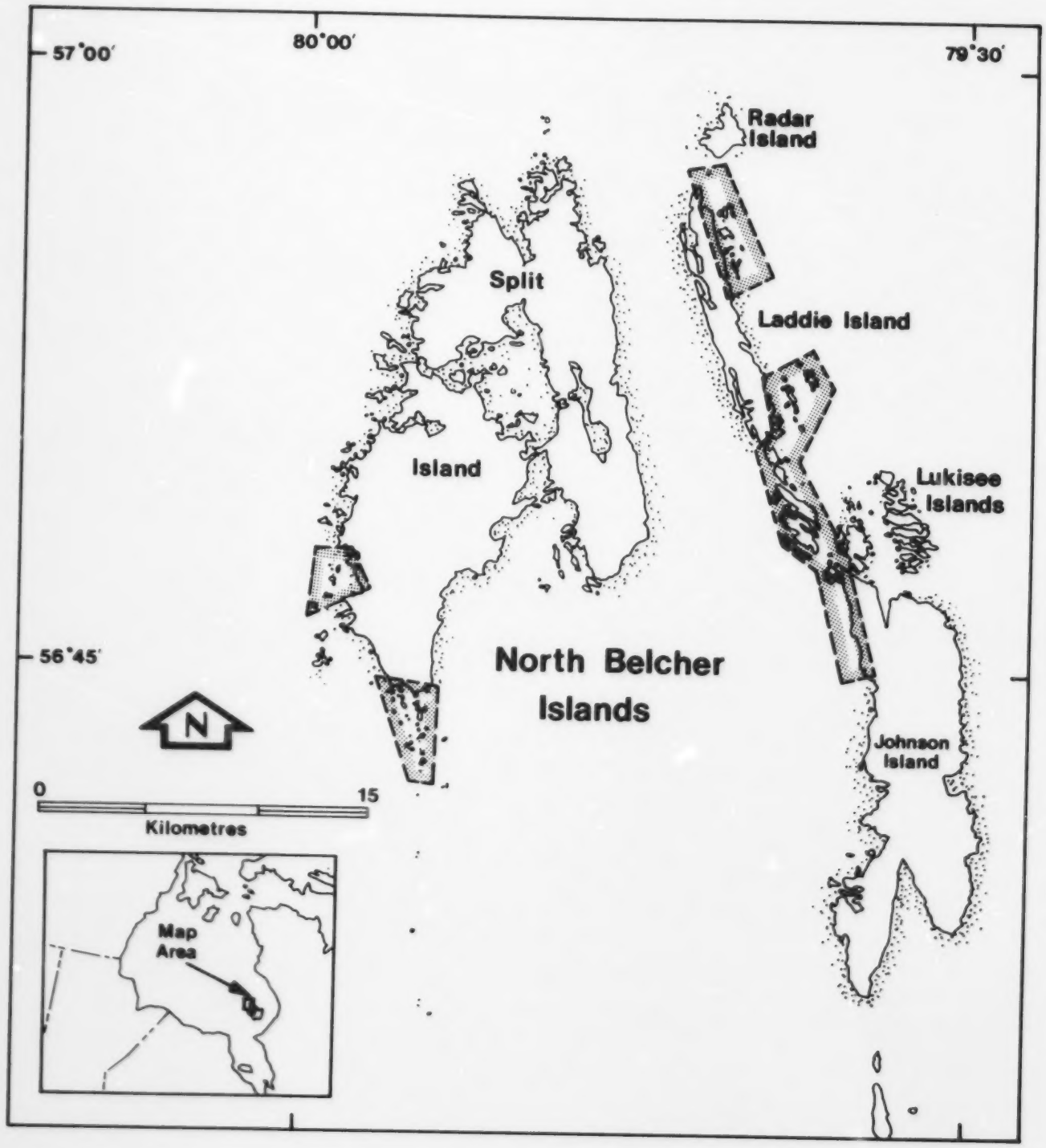
Freeman, M.M.R. 1970. Observations on the seasonal behaviour of the Hudson Bay Eider (*Somateria mollissima sedentaria*). Can. Field-Nat. 84:145–153.

Nakashima, D.J.; Murray, D.J. 1988. The Common Eider (*Somateria mollissima sedentaria*) of eastern Hudson Bay: A survey of nest colonies and Inuit ecological knowledge. Environ. Stud. Revolving Funds Rep. No. 102, Ottawa. 174 pp.


57°00′
80°00′
79°30′
Radar Island
Split
Island
Laddie Island
Lukisee Islands
56°45′
North Belcher Islands
Johnson Island
N
0
15
Kilometres
Map Area

Site 74: North Belcher Islands

Location: 56°45′N, 79°40′W **Size: 62 km²**

Description

The North Belcher Islands are situated in Hudson Bay just north of the main Belcher Islands, about 60 km northeast of the community of Sanikiluaq. The archipelago consists of three large islands (Split, Johnson, and Laddie) and almost 700 small islands. The islands north of Laddie Island are typically hump-shaped, with steep sides of exposed bedrock, and are sparsely vegetated. Other islands in the vicinity are more low-lying. Exposed bedrock is predominant, but there are also extensive areas of cobble and gravel. Islands off southwest Split Island are composed completely of cobble and boulders (Nakashima and Murray 1988).

Until the 1940s, Split Island was the most important Inuit camp in the Belcher Islands, owing to an abundance of walruses. This area continues to be an important camping and hunting area for people from Sanikiluaq (Nakashima and Murray 1988).

Biological value

In 1985, an estimated 2870 pairs of Hudson Bay Common Eiders (subspecies *sedentaria*) nested on small islands of this area: more than 1650 around Laddie Island and 1215 near Split Island (Nakashima and Murray 1988). This represents 7% of the national population. Not all islands were inhabited by the eiders; in their survey, which covered half the small islands, Nakashima and Murray recorded 80% of the nests on 11% of the islands in the Laddie Island area, and 87% of the nests on 5% of the islands in the Split Island area.

Many Hudson Bay Common Eiders winter along the western land-fast ice edge northwest of the Belcher and Sleeper islands (see Key Habitat Site 73) and, to a much lesser extent, on polynyas around the Belcher Islands (Freeman 1970; Nakashima and Murray 1988). Concentrations of wintering birds are very unusual in the Northwest Territories. In spring, eiders disperse as open water becomes available elsewhere; islands at the edges of archipelagos tend to be the first ice-free nesting areas. Eiders at the North Belcher Islands initiate nesting in the second and third weeks of June, and the eggs hatch in mid- to late July, shortly after which families disperse from the nesting islands.

About 380 pairs of Arctic Terns and 180 pairs of Glaucous and Herring gulls nested on islands in the archipelago in 1985, usually in association with Common Eiders (Nakashima and Murray 1988).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution in the surrounding marine environment would be detrimental to the eiders.

Potential conflicts

Oil exploration in central Hudson Bay is a potential source of pollution. Prevailing west and northwest winds render the east coast of the bay most susceptible to oil damage (Davidson 1985, cited in Nakashima and Murray 1988). Hunting and egg collecting may maintain local populations below the habitat's carrying capacity.

Status of Key Habitat Site

No special status.

References

Abraham, K.F.; Finney, G.H. 1986. Eiders of the eastern Canadian Arctic. Pages 55–73 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

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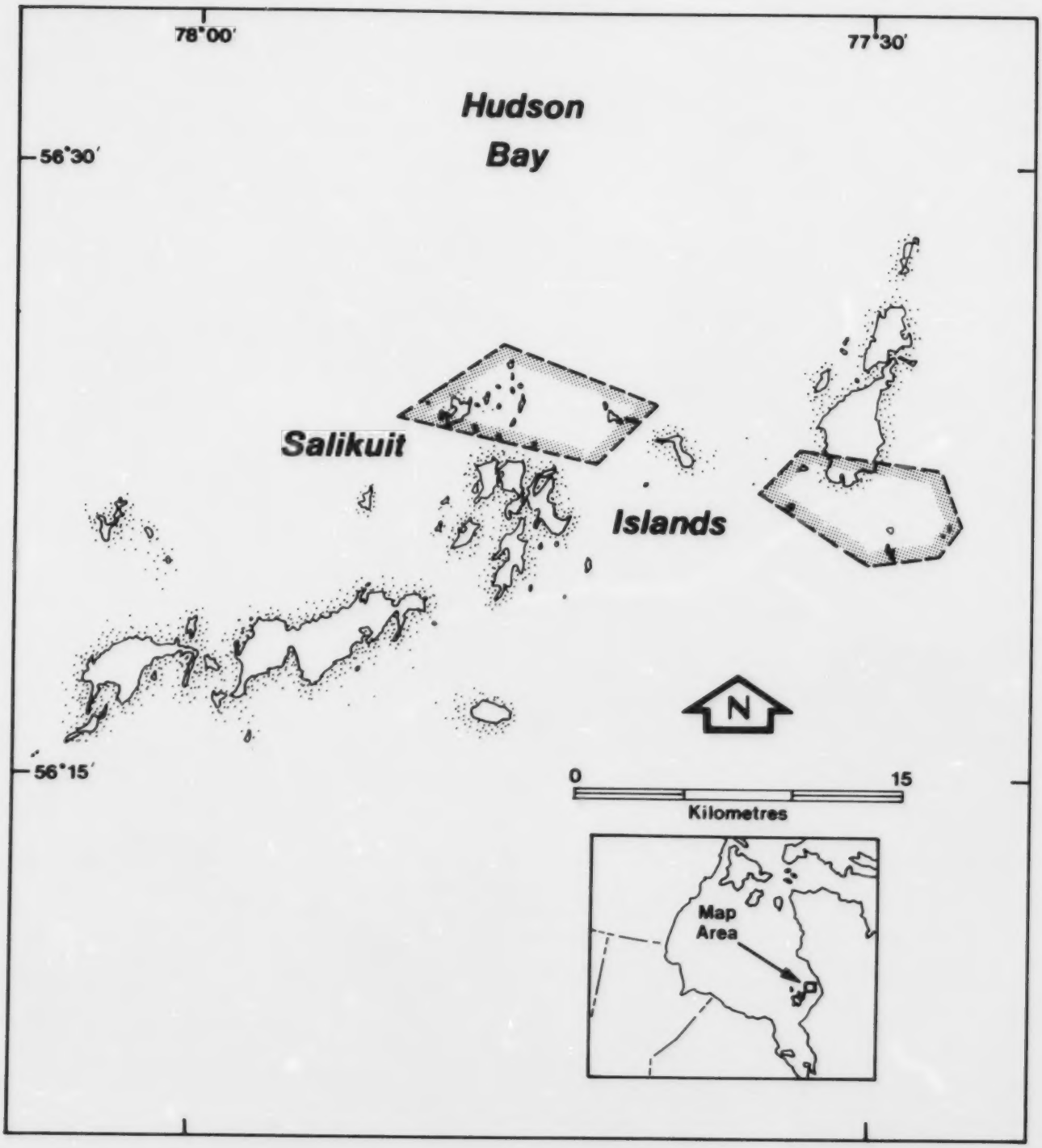

78°00'
77°30'
Hudson
Bay
56°30'
Salikuit
Islands
N
56°15'
0
15
Kilometres
Map
Area

Site 75: Salikuit Islands

Location: 56°22′N, 77°40′W **Size: 65 km²**

Description

The Salikuit Islands archipelago is situated in eastern Hudson Bay about halfway between the Belcher Islands and the Quebec coastline, approximately 80 km east of the community of Sanikiluaq. The archipelago consists of 91 islands less than 50 ha and 12 between 50 and 500 ha. The islands are primarily low-lying, exposed bedrock with some cobble. Some islands have extensive cobble beaches, which in some cases connect islands (Nakashima and Murray 1988).

The islands are rarely visited by people, but in the days before air travel they were an important stopover for travellers moving between the Belcher Islands and the Hudson Bay posts on the mainland (Nakashima and Murray 1988).

Biological value

In 1985, an estimated 895 pairs of Hudson Bay Common Eiders (subspecies *sedentaria*) nested on small islands in this area (Nakashima and Murray 1988). This represents 2% of the national population. Not all islands were inhabited by the eiders; in their survey, which covered a third of the small islands, Nakashima and Murray recorded 84% of the nests on 20% of the islands.

Many Hudson Bay Common Eiders winter along the western land-fast ice edge northwest of the Belcher Islands (see Key Habitat Site 74) and Sleeper Islands (see Key Habitat Site 73) and, to a much lesser extent, on polynyas around the Belcher Islands (Freeman 1970; Nakashima and Murray 1988). Concentrations of wintering birds are very unusual in the Northwest Territories. In spring, eiders disperse as open water becomes available elsewhere; islands at the edges of archipelagos tend to be the first ice-free nesting areas. Eiders at the Salikuit Islands probably initiate nesting in the second and third weeks of June, and the eggs hatch in mid- to late July, shortly after which families disperse from the nesting islands.

About 220 pairs of Arctic Terns and 180 pairs of Glaucous and Herring gulls nested on islands in the archipelago in 1985, usually in association with Common Eiders (Nakashima and Murray 1988).

Sensitivities

Nesting eiders are sensitive to disturbance at the colony and will desert the colony site altogether if disturbance is persistent. The occurrence and success of colonies are highly dependent on the presence of small, isolated islands. Pollution in the surrounding marine environment would be detrimental to the eiders.

Potential conflicts

Oil exploration in central Hudson Bay is a potential source of pollution. Prevailing west and northwest winds render the east coast of the bay most susceptible to oil damage (Davidson 1985, cited in Nakashima and Murray 1988).

Status of Key Habitat Site

No special status.

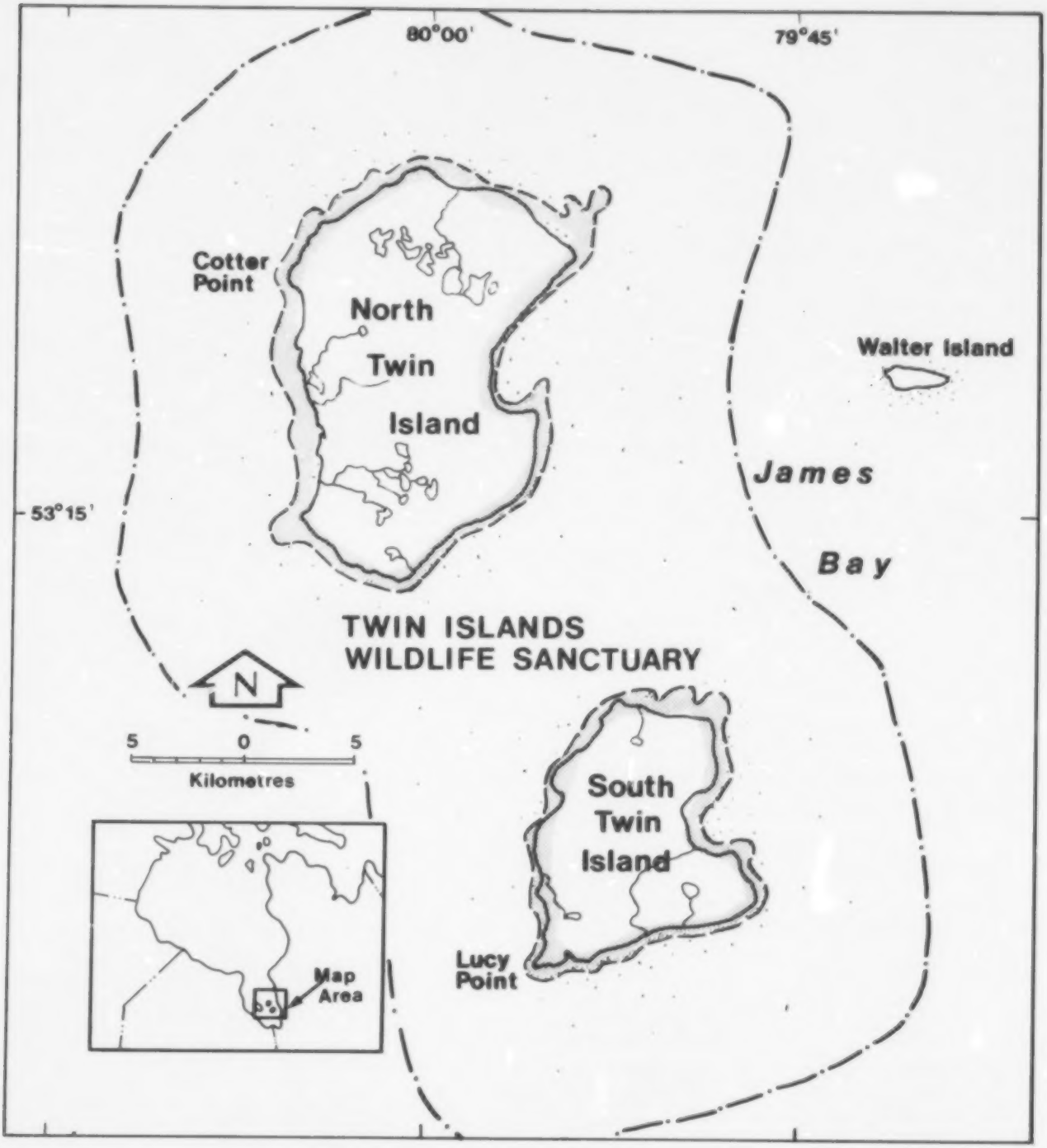
References

Abraham, K.F.; Finney, G.H. 1986. Eiders of the eastern Canadian Arctic. Pages 55–73 *in* A. Reed (ed.). Eider ducks in Canada. Rep. Ser. No. 47, Can. Wildl. Serv., Ottawa.

Davidson, L.W. 1985. Oil spill trajectory scenario for the proposed Canterra Energy Ltd. Hudson Bay acreage well-sites. Seaconsult Ltd., St. John's.

Freeman, M.M.R. 1970. Observations on the seasonal behaviour of the Hudson Bay Eider (*Somateria mollissima sedentaria*). Can. Field-Nat. 84:145–153.

Nakashima, D.J.; Murray, D.J. 1988. The Common Eider (*Somateria mollissima sedentaria*) of eastern Hudson Bay: A survey of nest colonies and Inuit ecological knowledge. Environ. Stud. Revolving Funds Rep. No. 102, Ottawa. 174 pp.


80°00'
79°45'
Cotter Point
North Twin Island
Walter Island
James Bay
53°15'
TWIN ISLANDS WILDLIFE SANCTUARY
N
5 0 5
Kilometres
South Twin Island
Lucy Point
Map Area

Site 76: Twin Islands

Location: 53°10′N, 79°55′W **Size: 301 km²**

Description

The Twin Islands are situated in central James Bay, 60–75 km west of mainland Quebec.

North Twin Island, 150 km² in area, is composed chiefly of unconsolidated sand and gravel and reaches a maximum elevation of 60 m above sea level. About one-quarter of the island is covered by lakes. Sand dunes occur along half of the coastline, and wide tidal flats border most of the island. Marshland is scattered throughout the island. Tussock tundra is also common, especially in western areas of the island. Small stands of white spruce, dwarf birch, and willows also occur.

South Twin Island, 11 km southeast of North Twin Island, is about half the size of its northern counterpart, with similar topography but fewer trees and more mossy tundra (Manning 1981).

Biological value

The status of this area as a Key Habitat Site is tentative; the available data are inadequate for a full assessment.

In 1973, 1500 Canada Geese (subspecies *interior*) nested on North Twin Island. Similar densities of birds were noted on South Twin Island (Manning 1981), so that the breeding population of the two islands was approximately 2300 birds (1.5% of the Tennessee Valley population of Canada Geese at that time). Eastern Canada Goose populations have nearly doubled since 1973 (based on winter population indices; Anon. 1988:54). Further studies are needed to determine if there has been a similar increase on the Twin Islands. The geese arrive by early May and depart from the area by the end of September.

Manning (1981) estimated the breeding populations of other birds on North Twin Island as follows: 1450 ducks (mostly Oldsquaw, Lesser Scaup, Northern Pintail, and Green-winged Teal); 800 Willow Ptarmigan; 1200 Semipalmated Plovers; 2000 Semipalmated Sandpipers; 1800 other shorebirds (e.g., Northern Phalaropes, Least Sandpipers, Dunlins, and Purple Sandpipers); 500 Arctic Terns; and 8000 passerines (mostly Horned Larks, Water Pipits, Savannah Sparrows, Tree Sparrows, White-crowned Sparrows, and Lapland Longspurs). Assuming similar densities of birds on both islands, the combined estimate for all nesting species would be in the order of 23 600 birds.

Polar bears use the Twin Islands as summer retreats and maternity denning areas more heavily than any other sites in James Bay (Jonkel et al. 1976).

Sensitivities

Low-lying areas are susceptible to terrain disruption. Geese are sensitive to disturbance.

Potential conflicts

None.

Status of Key Habitat Site

Twin Islands Wildlife Sanctuary; part of the James Bay Preserve; IBP Site.

References

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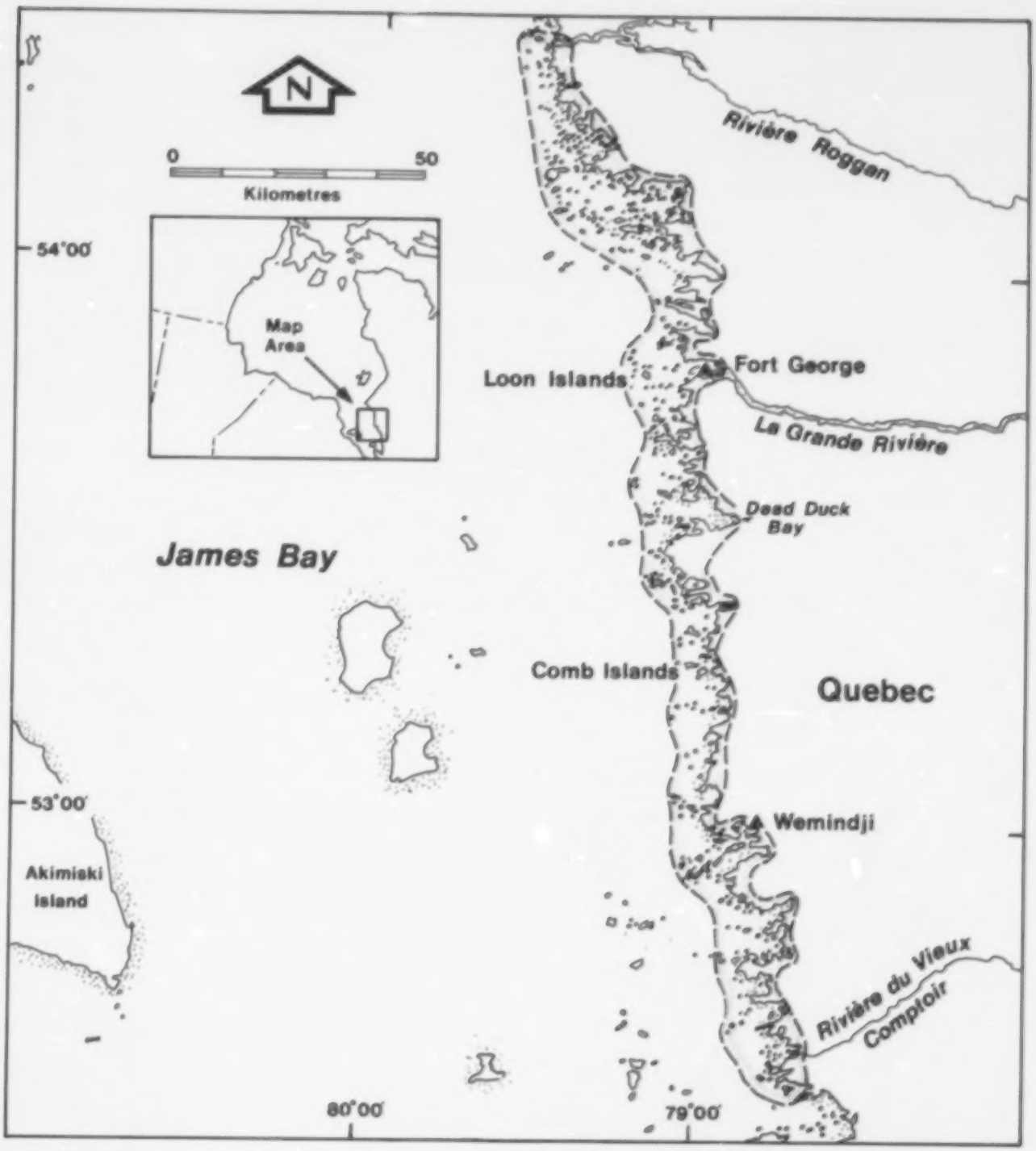
Manning, T.H. 1981. Birds of the Twin Islands, James Bay, NWT, Canada. Syllogeus No. 3, Natl. Mus. Can., Ottawa. 50 pp.


N
0
50
Kilometres
Map Area
54°00'
53°00'
80°00'
79°00'
Rivière Roggan
Loon Islands
Fort George
La Grande Rivière
Dead Duck Bay
James Bay
Comb Islands
Quebec
Wemindji
Akimiski Island
Rivière du Vieux Comptoir

Site 77: Northeast James Bay

Location: 53°35'N, 79°00'W **Size:** 3186 km²

Description

All offshore islands and reefs in this area are within the Northwest Territories. These islands, along with the sheltered bays, marshes, mud flats, and eelgrass beds between the Rivière du Vieux Comptoir and Rivière Roggan on the Quebec coast of James Bay, comprise the area's key habitats. The multitude of rivers and streams flowing into James Bay creates a rich blend of marine, estuarine, and freshwater environments with highly productive waters and coastal wetlands. Eelgrass grows extensively in sheltered areas, such as in the lee of the Comb Islands and in Dead Duck Bay (Dignard et al. 1991). Silt, sand, or coarse gravel flats are abundant in bays with incoming streams and rivers, and many nearshore islands are connected to the mainland during low tide. Marine, brackish, and freshwater marshes are associated with the stream- and tide-fed bays.

Biological value

The marine, estuarine, and freshwater habitats along the Quebec coast of James Bay are extremely important for waterfowl, including Tundra Swan, Canada Goose, Atlantic Brant, and Lesser Snow Goose (Dignard et al. 1991). Approximately 23 species of shorebirds have been observed there, including eight breeding species (Dignard et al. 1991). Moulting and fall staging dabbling ducks, particularly American Black Ducks, and sea ducks are also very abundant (Curtis and Allen 1976; Morrison and Harrington 1979).

Canada Geese are among the most abundant birds during spring migration. More than 51 300 and 65 400 Canada Geese (subspecies *interior*) were seen in this area in late May 1973 and 1974, respectively (Curtis and Allen 1976), which is over 5% of the national population of the *interior* subspecies. Thousands of American Black Ducks feed on the mud flats and eelgrass beds during the summer months; about 6900, which represent over 2% of the national American Black Duck population estimate, were seen in the area in late July and early August 1974 (Curtis and Allen 1976). In addition, 4000 dabbling ducks, 6300 diving ducks, and 17 400 sea ducks were also seen in 1974.

Canada Geese, Lesser Snow Geese, Atlantic Brant, and shorebirds are abundant in September and October. More than 61 400 and 120 700 Canada Geese were seen in mid-September and early October 1973, respectively. The latter number is over 9% of the national population estimate. Also in 1973, more than 10 000 Atlantic Brant were present in early October. The number increased to over 20 500 by late October, which is 16% of the national population of Atlantic Brant. Dead Duck Bay, in particular, is heavily used. Bellrose (1980:168) stated that James Bay is the most important fall staging area for Atlantic Brant, citing that more than 60 000 Brant used the Fort George area in mid-September 1971. Thousands of Snow Geese migrate through the area, but most birds stage in southern James Bay. Estimates of use by shorebirds in late summer and fall are not available. This represents a serious gap in our knowledge of the importance of James Bay to migratory birds (Curtis and Allen 1976).

The above data do not take into account turnover rates at staging sites and therefore underestimate the extent of staging in the area.

Sensitivities

Staging and moulting waterfowl and shorebirds are sensitive to disturbance. Pollution or degradation of the marine, estuarine, and freshwater habitats would be detrimental.

Potential conflicts

The first phase of the massive La Grande Rivière hydro development, built between 1973 and 1986, has brought about great changes in the annual hydrological cycles of the rivers in this region. The effects of these changes on the coastal habitats have been studied by Hydro-Québec, but the results have not been made public. Probable impacts include the degradation of habitats via the disruption of water flows, sedimentation patterns, salinity gradients, and freshwater nutrient input. The Great Replenishment and Northern Development Canal scheme (Bourassa 1985), which proposes a dam across the mouth of James Bay, could result in catastrophic alterations to the James Bay estuarine and marine ecosystem (Milko 1986).

Status of Key Habitat Site

Part of the James Bay Preserve.

References

Bellrose, F.C. 1980. Ducks, geese, and swans of North America. Stackpole Books, Harrisburg, Pa. 540 pp.

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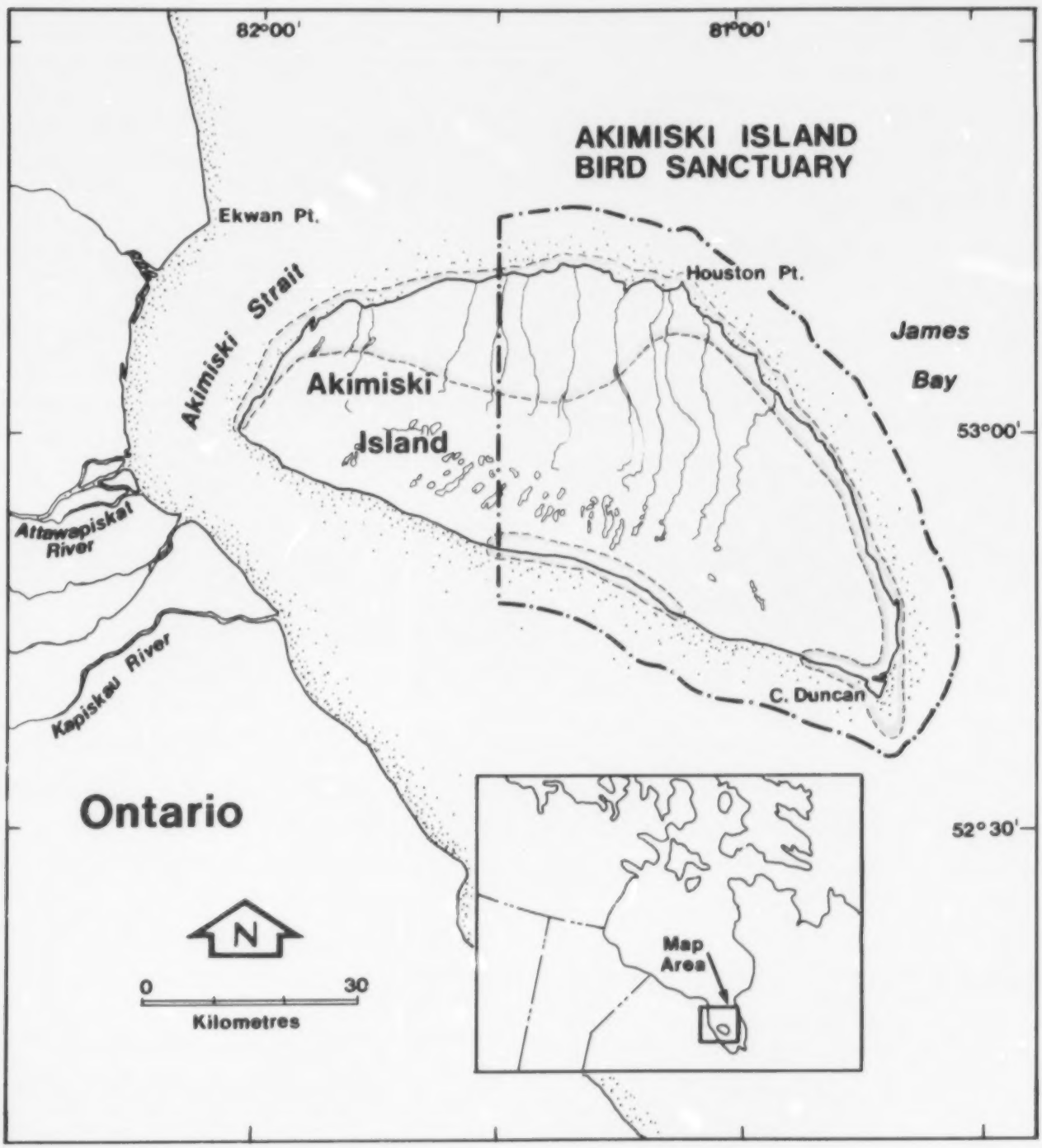
82°00'
81°00'
AKIMISKI ISLAND
BIRD SANCTUARY
Ekwan Pt.
Akimiski Strait
Houston Pt.
James
Bay
Akimiski
Island
53°00'
Attawapiskat
River
Kapiskau River
C. Duncan
Ontario
52°30'
N
0
30
Kilometres
Map
Area

Site 78: Akimiski Island

Location: 53°10′N, 81°20′W **Size:** 1223 km²

Description

Akimiski Island is situated in midwestern James Bay opposite the mouth of the Attawapiskat River. It is underlain by Silurian limestone and dolomite (Sanford et al. 1968) and has a very low relief. The southern shore rises steeply from the water, then gradually slopes downward to the mud flats along the northern shore.

The northern coast is bordered by sedge marshlands with a willow fringe farther inland. To the west, willows merge into a tamarack fen with permafrost hummocks; in the east, beach ridges and black spruce occur. In southern areas, the island is covered by lichen heath, deep peat, and muskeg ponds (H. Lumsden, pers. commun.).

Biological value

As many as 250 000 Lesser Snow Geese (14% of the national population) have spent short periods staging along the north shore during the spring (S. Curtis, pers. commun., in Allison 1977). In 1976, at least 2000 Lesser Snow Geese nested at the edge of the willow fringe (Allison 1977). Numbers of nesting Lesser Snow Geese have since declined to approximately 1000 (H. Lumsden, pers. commun.).

Approximately 100 pairs of Caspian Terns, which represents over 1% of the national population, nested on the island in the early 1980s (R.I.G. Morrison, pers. commun.). The Caspian Tern is a rare species in Canada (Martin 1978).

The west coast of James Bay, including Akimiski Island, provides critical staging habitat for thousands of shorebirds. Significant numbers of Red Knots and Hudsonian Godwits may stage along these coasts (specific data are not available). Semipalmated Sandpipers are abundant (Morrison and Harrington 1979). The northwest coast of Akimiski Island appears to be the most important area (R.I.G. Morrison, pers. commun., in Allison 1977).

Large Canada Geese, from the Tennessee Valley population, nest among the permafrost hummocks in the tamarack fen and stage on the island's coast. Atlantic Brant feed in the eelgrass beds along the northwest coast and at Cape Duncan while moulting and staging. Thousands of American Black Ducks moult and stage along the east coast, particularly around the latitude of Akimiski Island, from June to September (H. Lumsden, pers. commun., in Allison 1977; Ross 1984).

Northern Akimiski Island is a summer retreat and maternity denning area for polar bears (Jonkel et al. 1976).

Sensitivities

Staging and moulting waterfowl and shorebirds are sensitive to disturbance. Pollution or degradation of the marine, estuarine, and freshwater habitats would be detrimental.

Potential conflicts

The Great Replenishment and Northern Development Canal scheme (Bourassa 1985), which proposes a dam across the mouth of James Bay, could result in catastrophic alterations to the James Bay estuarine and marine ecosystem (Milko 1986).

Status of Key Habitat Site

The eastern part of the island lies within Akimiski Island Bird Sanctuary; part of the James Bay Preserve.

References

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories — a background paper. Unpubl. rep., Can. Wildl. Serv., Edmonton. 3 vols. 370 pp.

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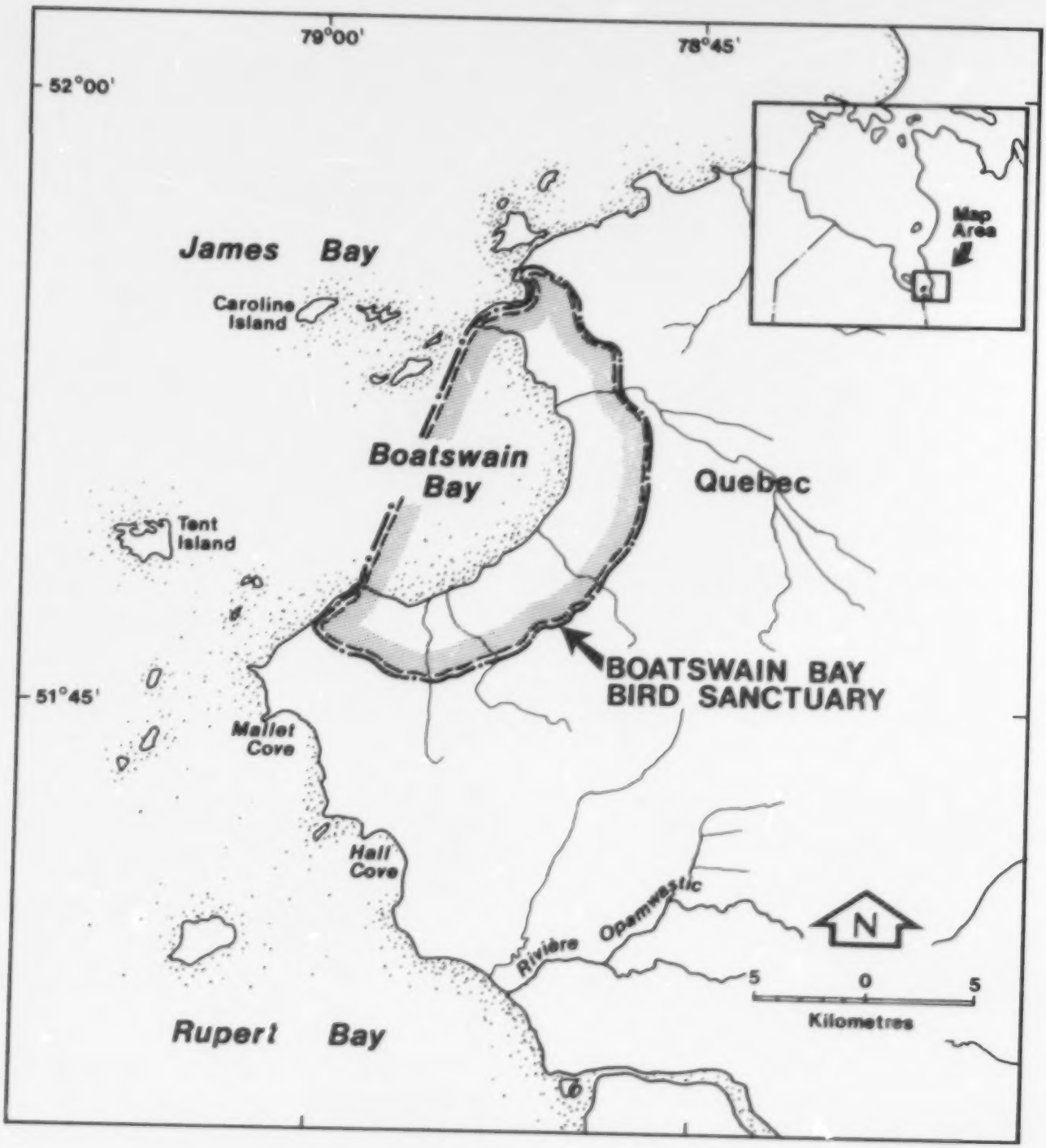
79°00'
78°45'
52°00'
Map Area
James Bay
Caroline Island
Boatswain Bay
Quebec
Tent Island
BOATSWAIN BAY BIRD SANCTUARY
51°45'
Mallet Cove
Hall Cove
Rivière Opamwastic
N
5
0
5
Kilometres
Rupert Bay

Site 79: Boatswain Bay

Location: 51°50′N, 78°52′W **Size: 179 km²**

Description

Boatswain Bay lies in the southeast corner of James Bay, approximately 40 km north of Fort Rupert, Quebec. The site includes all waters and lands in Boatswain Bay and all land 3 km inland from the high-tide mark. All offshore islands and reefs in this area are part of the Northwest Territories.

The topography is generally of low relief. The land slowly rises from coastal mud flats, bordered by spikerush marsh, through a sedge–grass lowland complex to willow and spruce farther inland. On the south side of Boatswain Bay, the marsh is relatively narrow, but it increases in width to approximately 1.6 km on the north side (Smith 1944). The area is one of two salt marshes along the Quebec side of James Bay (Allison 1977).

Biological value

Much of the Quebec coast of James Bay is very important for a variety of migrating and moulting water birds, including Canada Geese, Lesser Snow Geese, Atlantic Brant, American Black Ducks, Northern Pintails, scoters, scaups, and several species of shorebirds (Curtis and Allen 1976). Boatswain Bay is an important staging site for Canada Geese and Lesser Snow Geese (Allison 1977; Bellrose 1980). More than 14 800 Canada Geese and 3000 Lesser Snow Geese were seen in and around Boatswain Bay during a survey in the spring of 1972 (Curtis and Allen 1976). Fall migrating Canada and Snow geese also make intensive use of the coastal areas. Curtis and Allen (1976) also recorded 535 migrating Atlantic Brant in the spring and a further 2474 birds in the fall. Bellrose (1980:168) stated that James Bay is the most important fall staging area for Atlantic Brant. Turnover rates are not known, but it is likely that far greater numbers of geese stage in this area, accounting for more than 1% of the national populations for at least Canada Geese and Atlantic Brant.

Dabbling ducks, particularly the American Black Duck, stage, moult, and nest in the surrounding area. The number of American Black Ducks likely exceeds 1% of the national population. Large numbers of shorebirds also migrate through this area (Curtis and Allen 1976).

Sensitivities

Staging and moulting waterfowl and shorebirds are sensitive to disturbance. Pollution or degradation of the marine, estuarine, and freshwater habitats would be detrimental.

Potential conflicts

The first phase of the massive La Grande Rivière hydro development, built between 1973 and 1986, has brought about great changes in the annual hydrological cycles of the rivers in this region. The effects of these changes on the coastal habitats have been studied by Hydro-Québec, but the results have not been made public. Probable impacts include the degradation of habitats via the disruption of water flows, sedimentation patterns, salinity gradients, and freshwater nutrient input. The Great Replenishment and Northern Development Canal scheme (Bourassa 1985), which proposes a dam across the mouth of James Bay, could result in catastrophic alterations to the James Bay estuarine and marine ecosystem (Milko 1986).

Status of Key Habitat Site

Boatswain Bay Bird Sanctuary; part of the James Bay Preserve.

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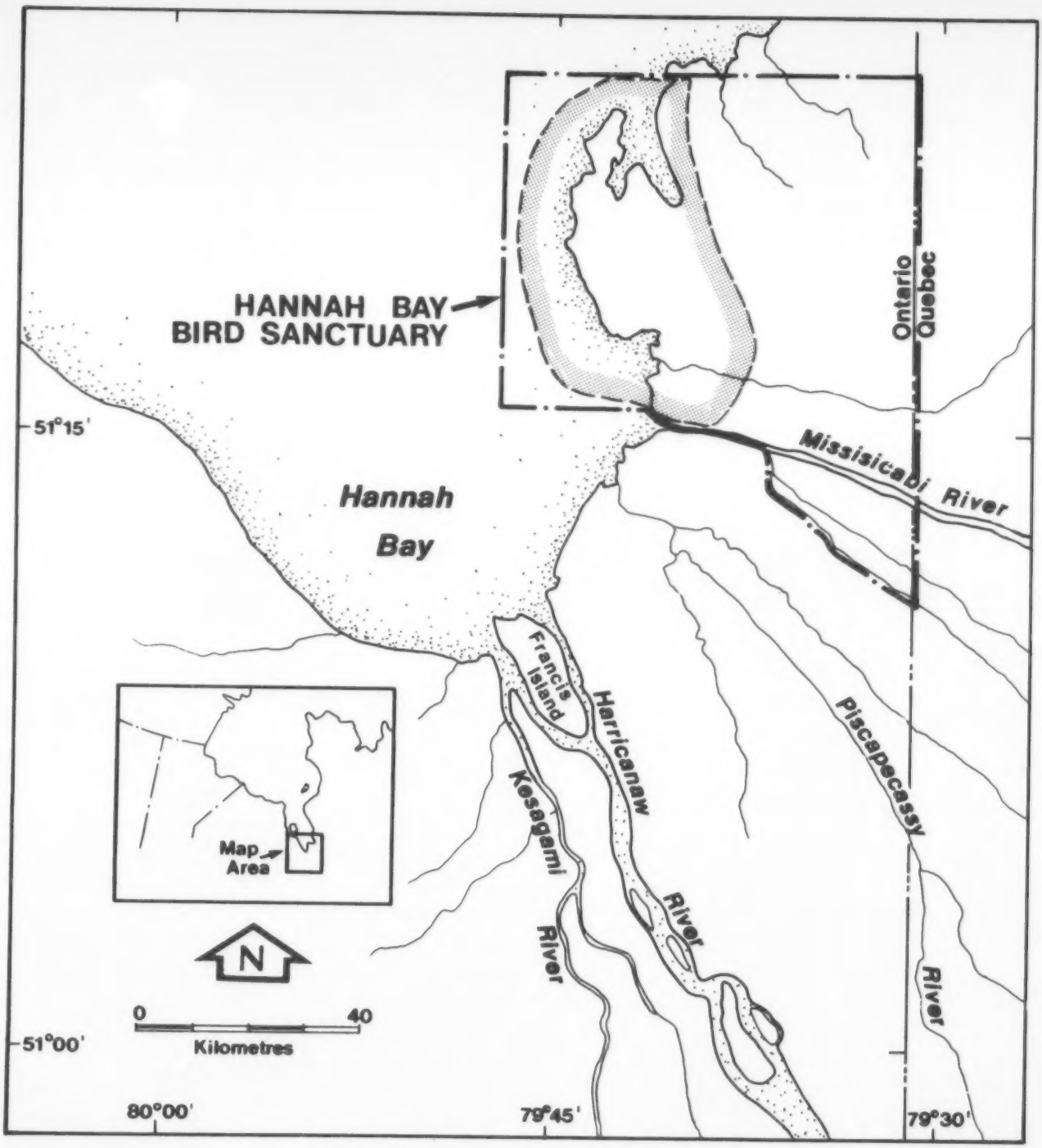
HANNAH BAY
BIRD SANCTUARY
Ontario
Quebec
51°15'
Hannah
Bay
Missisicabi River
Francis
Island
Harricanaw
River
Kesagami
River
Piscapecassy
River
Map
Area
N
0
40
Kilometres
51°00'
80°00'
79°45'
79°30'

Site 80: Hannah Bay

Location: 51°15′N, 79°45′W **Size: 181 km²**

Description

Hannah Bay lies in the extreme southern end of James Bay on the Ontario–Quebec border. Two large rivers, the Harricanaw and the Missisicabi, drain into Hannah Bay. All offshore islands and reefs in this area are within the Northwest Territories.

Hannah Bay is one of the widest expanses of marsh along the James Bay coast (Allison 1977). The coastal marsh averages approximately 1.5 km in width, whereas the adjacent tidal flats are approximately 15 km wide. The flats are generally hard-packed silts and clays, and the water in the bay is turbid and brackish. The marsh-edge vegetation of rush species merges into sedge marshes with numerous ponds. The west side of the bay is paralleled by three beach ridges, which divide the marsh into sections with progressively more sphagnum as one moves inland (Smith 1944).

Biological value

Extensive mud flats and sedge marshes attract large numbers of migrating Lesser Snow Geese, Canada Geese, and shorebirds. In spring, numerous ponds of meltwater form in the marsh along the willow fringe. These ponds are heavily used by Lesser Snow Geese and dabbling ducks when they first arrive in late April and early May (Curtis and Allen 1976). The mouths of the Harricanaw and Missisicabi rivers are important to Atlantic Brant in late May and early June (Allison 1977).

Snow Geese are the most numerous species staging in Hannah Bay. In fall 1973, 28 600 Lesser Snow Geese and 1900 large Canada Geese were noted (Curtis 1973). Lumsden (1971) recorded 64 500 Lesser Snow Geese from 15 to 18 October 1971.

The endangered Eskimo Curlew has been seen near Hannah Bay (Hagar and Anderson 1977).

Sensitivities

Staging and moulting waterfowl and shorebirds are sensitive to disturbance. Pollution or degradation of the marine, estuarine, and freshwater habitats would be detrimental.

Potential conflicts

The first phase of the massive La Grande Rivière hydro development, built between 1973 and 1985, has brought about great changes in the annual hydrological cycles of the rivers in this region. The effects of these changes on the coastal habitats have been studied by Hydro-Québec, but the results have not been made public. Probable impacts include the degradation of habitats via the disruption of water flows, sedimentation patterns, salinity gradients, and freshwater nutrient input. The Great Replenishment and Northern Development Canal scheme (Bourassa 1985), which proposes a dam across the mouth of James Bay, could result in catastrophic alterations to the James Bay estuarine and marine ecosystem (Milko 1986).

Status of Key Habitat Site

Hannah Bay Bird Sanctuary; Wetland of International Importance; part of the James Bay Preserve.

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Appendices

Appendix A-1
Summary of Key Habitat Sites for breeding populations[a] of swans and geese in the Northwest Territories

Site No./Name	Area (km²)	Tundra and Trumpeter swans		Lesser Snow Goose[b]		Greater Snow Goose[c]		Atlantic Brant[d]		Pacific Brant[e]		Ross' and Canada geese	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
3. Anderson River Delta[f]	491			8 000	1					2 500	6		
6. Egg River[f]	20 518			196 500	11					3 000	7		
27. Berlinguet Inlet	11 141					14 700	7						
30. South Bylot Island[f]	1 511					26 700	13						
37. North Spicer Island	341							1 250	1				
38. Foxe Basin Islands	3 000							1 800	1				
39. Great Plain of the Koukdjuak[f]	12 931			454 800	25			1 600	1				
43. Southeastern Mackenzie Mountains	1 976	73[g]	15										
50. Jenny Lind Island	355			33 000	2								
51. Queen Maud Gulf[f]	53 925			274 600	15							177 600[h]	99
55. Rasmussen Lowlands	5 278	6 000[i]	4										
57. McConnell River[f]	4 940			436 340	24								
59. Boas River[f]	5 402			190 400	10								
60. East Bay[f]	2 506			42 600	2								
76. Twin Islands	301											2 300[j]	1
Total numbers and percentages for each species		73[g]	15	1 636 240	90	41 400	20	4 650	3	5 500	13	177 600[h]	99
		6 000[i]	4									2 300[j]	1

[a] No. = number of breeding individuals at the Key Habitat Site; % = percentage of the national population that the Key Habitat Site supports.
[b] The Key Habitat Sites that support Lesser Snow Geese (n=8) total 101 068 km². Of this total, 82 330 km² (81%) receive protection under Migratory Bird Sanctuary status.
[c] The Key Habitat Sites that support Greater Snow Geese (n=2) total 12 652 km². Of this total, 1511 km² (12%) receive protection under Migratory Bird Sanctuary status.
[d] The Key Habitat Sites that support Atlantic Brant (n=3) total 16 272 km². Of this total, 8160 km² (50%) receive protection under Migratory Bird Sanctuary status.
[e] The Key Habitat Sites that support Pacific Brant (n=2) total 21 009 km². All of this area occurs within Migratory Bird Sanctuaries.
[f] Part of an existing Migratory Bird Sanctuary.
[g] Trumpeter Swan. The Key Habitat Site that supports Trumpeter Swans encompasses 1976 km². A small part of this site occurs within Nahanni National Park Reserve; the remaining habitat within this site does not receive any formal protection.
[h] Ross' Goose. The Key Habitat Site that supports Ross' Geese encompasses 53 925 km²; 50 175 km² (93%) of this area occurs within the Queen Maud Gulf Bird Sanctuary.
[i] Tundra Swan. The Key Habitat Site that supports Tundra Swans encompasses 5278 km². Approximately one-third of this site overlaps with the Wetland of International Importance designation (Ramsar Convention).
[j] Canada Goose, subspecies *interior*. The Key Habitat Site that supports Canada Geese (subspecies *interior*) encompasses 301 km². None of this area receives protection.

Appendix A-2
Summary of Key Habitat Sites for breeding populations[a] of eiders, gulls, and terns in the Northwest Territories

Site No./Name	Area (km²)	King Eider[b]		Northern Common Eider[c]		Hudson Bay Common Eider[d]		Ivory Gull[e]		Sabine's Gull[f]		Caspian Tern[g]	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
6. Egg River[h]	20 518	100 000	—[i]										
9. Seymour Island[h]	8							300	12				
17. Sydkap Ice Field	1							300	12				
18. Inglefield Mountains	14							830	35				
19. Eastern Devon Island	4							91	3				
26. Northwestern Brodeur Peninsula	10							580	24				
38. Foxe Basin Islands	3 000									3 700	18		
39. Great Plain of the Koukdjuak[h]	12 931									1 500	5		
46. Northwest Point	1											220	1
47. North Arm, Great Slave Lake	1 129											154	1
58. Turton Island	2			3 000	2								
60. East Bay[h]	2[j]			11 800	6								
63. Fraser Island	35			6 000	3								
65. Awrey Island	1			2 000	1								
68. Eider Islands	72			8 200	4								
69. Plover and Payne Islands	220			7 000	4								
70. Gyrfalcon Islands	150			7 200	4								
71. Northeast Ungava Bay	225			13 400	7								
72. Koktac River Archipelago	530					4 600	5						
73. Sleeper Islands	226					11 800	14						
74. North Belcher Islands	62					5 740	7						
75. Salikuit Islands	65					1 790	2						
78. Akimiski Island[h]	1 223											200	1
Total numbers and percentages for each species		100 000	—[i]	58 600	31	23 930	28	2 101	86	5 200	23	574	3

[a] No. = number of breeding individuals at the Key Habitat Site; % = percentage of the national population that the Key Habitat Site supports.
[b] The Key Habitat Site that supports King Eiders encompasses 20 518 km². All of this area occurs within Banks Island Bird Sanctuary No. 1.
[c] The Key Habitat Sites that support Northern Common Eiders (presumably subspecies *borealis*) (n=8) total 707 km². Only 2 km² (<1%) receive protection under Migratory Bird Sanctuary status.
[d] The Key Habitat Sites that support Hudson Bay Common Eiders (subspecies *sedentaria*) (n=4) total 883 km². None of this area receives formal protection.
[e] The Key Habitat Sites that support Ivory Gulls (n=5) total 37 km². Of this total, 8 km² (22%) receive protection under Migratory Bird Sanctuary status.
[f] The Key Habitat Sites that support Sabine's Gulls (n=2) total 15 931 km². Of this total, 8160 km² (51%) receive protection under Migratory Bird Sanctuary status.
[g] The Key Habitat Sites that support Caspian Terns (n=3) total 2353 km². The nesting distribution of Caspian Terns in Akimiski Island Bird Sanctuary is not well known. Therefore, it is difficult to estimate how much of their breeding habitat is currently protected.
[h] Part of an existing Migratory Bird Sanctuary.
[i] The size of the King Eider population in Canada is not known. Nonetheless, 100 000 eiders likely represent 5–10% of the national population.
[j] The Key Habitat Site at East Bay is 2506 km² in total area, but the nesting eiders are concentrated on a small island (2 km²) in the bay.

Appendix A-3

Summary of Key Habitat Sites for breeding populations[a] of seabirds in the Northwest Territories

Site No./Name	Area (km^2)	Northern Fulmar[b]		Black-legged Kittiwake[c]		Thick-billed Murre[d]		Black Guillemot[e, f]			
		No.	%	No.	%	No.	%	No.	%	No.	%
5. Cape Parry[g]	2										
12. Browne Island	1			4 000	2	800	—				
13. Baillie-Hamilton Island	1			6 000	2						
14. North Kent Island	16							1 100	1	16 000	11
15. Cape Vera	8	15 000	2								
16. Skruis Point	31							1 600	1	20 000	13
20. Coburg Island	6	6 000	1	60 000	16	320 000	11				
21. Cape Liddon	3	20 000	3								
22. Hobhouse Inlet	10	150 000	20								
23. Prince Leopold Island[g]	32	124 000	17	58 000	16	172 000	6	8 000	5	8 000	5
24. Batty Bay	1			4 000	1						
28. Baillarge Bay	16	50 000	7								
29. Cape Hay[g]	3			40 000	11	280 000	10				
31. Cape Graham Moore[g]	1			6 000	1	40 000	1				
32. Buchan Gulf	22	50 000	7								
33. Scott Inlet	5	50 000	7								
35. Cape Searle	2	200 000	27								
36. Reid Bay	5	20 000	3			400 000	14				
61. Coats Island	3					48 000	2				
64. Digges Sound	12					574 000	20				
66. Hantzsch Island	1			10 000	2	100 000	3				
67. Akpatok Island	32					586 000	20				
Total numbers and percentages for each species		685 000	94	188 000	51	2 520 800	87	10 700	7	44 000	29

[a] No. = number of breeding individuals at the Key Habitat Site; % = percentage of the national population that the Key Habitat Site supports.

[b] The Key Habitat Sites that support Northern Fulmars (n=10) total 109 km^2. Of this total, 32 km^2 (29%) receive protection under Migratory Bird Sanctuary status.

[c] The Key Habitat Sites that support Black-legged Kittiwakes (n=8) total 46 km^2. Of this total, 36 km^2 (78%) receive protection under Migratory Bird Sanctuary status.

[d] The Key Habitat Sites that support Thick-billed Murres (n=10) total 97 km^2. Of this total, 38 km^2 (39%) receive protection under Migratory Bird Sanctuary status.

[e] The estimates of the numbers of guillemots breeding at Skruis Point and North Kent Island in 1973 (left columns) and 1984 (right columns) are very different. The discrepancies may have been due to the different survey methods. More surveys are needed to determine whether the differences represent a decline in numbers.

[f] The Key Habitat Sites that support Black Guillemots (n=3) total 79 km^2. Of this total, 32 km^2 (41%) receive protection under Migratory Bird Sanctuary status.

[g] Part of an existing Migratory Bird Sanctuary. (Prince Leopold Island Bird Sanctuary is scheduled for designation in 1991.)

Appendix B
Scientific names of bird species and subspecies mentioned in the text (excluding Table 1)

English name	Scientific name	English name	Scientific name
Red-throated Loon	*Gavia stellata*	Hudsonian Godwit	*Limosa haemastica*
Pacific Loon	*Gavia pacifica*	Ruddy Turnstone	*Arenaria interpres*
Common Loon	*Gavia immer*	Sanderling	*Calidris alba*
Yellow-billed Loon	*Gavia adamsii*	Semipalmated Sandpiper	*Calidris pusilla*
Green-winged Teal	*Anas crecca*	Least Sandpiper	*Calidris minutilla*
Mallard	*Anas platyrhynchos*	White-rumped Sandpiper	*Calidris fuscicollis*
Northern Pintail	*Anas acuta*	Baird's Sandpiper	*Calidris bairdii*
Northern Shoveler	*Anas clypeata*	Pectoral Sandpiper	*Calidris melanotos*
American Wigeon	*Anas americana*	Stilt Sandpiper	*Calidris himantopus*
Canvasback	*Aythya valisineria*	Long-billed Dowitcher	*Limnodromus scolopaceus*
Greater Scaup	*Aythya marila*	Red-necked Phalarope	*Phalaropus lobatus*
Lesser Scaup	*Aythya affinis*	Red Phalarope	*Phalaropus fulicaria*
King Eider	*Somateria spectabilis*	Pomarine Jaeger	*Stercorarius pomarinus*
Oldsquaw	*Clangula hyemalis*	Parasitic Jaeger	*Stercorarius parasiticus*
Surf Scoter	*Melanitta perspicillata*	Long-tailed Jaeger	*Stercorarius longicaudus*
White-winged Scoter	*Melanitta fusca*	Bonaparte's Gull	*Larus philadelphia*
Common Goldeneye	*Bucephala clangula*	Mew Gull	*Larus canus*
Common Merganser	*Mergus merganser*	Ring-billed Gull	*Larus delawarensis*
Red-breasted Merganser	*Mergus serrator*	California Gull	*Larus californicus*
Bald Eagle	*Haliaeetus leucocephalus*	Herring Gull	*Larus argentatus*
Peregrine Falcon	*Falco peregrinus*	Thayer's Gull	*Larus glaucoides thayeri*
Gyrfalcon	*Falco rusticolus*	Kumlien's Gull	*Larus glaucoides kumlieni*
Willow Ptarmigan	*Lagopus lagopus*	Glaucous Gull	*Larus hyperboreus*
Rock Ptarmigan	*Lagopus mutus*	Common Tern	*Sterna hirundo*
Sandhill Crane	*Grus canadensis*	Arctic Tern	*Sterna paradisaea*
Black-bellied Plover	*Pluvialis squatarola*	Black Tern	*Chlidonias niger*
Lesser Golden-Plover	*Pluvialis dominica*	Dovekie	*Alle alle*
Semipalmated Plover	*Charadrius semipalmatus*	Snowy Owl	*Nyctea scandiaca*
Lesser Yellowlegs	*Tringa flavipes*	Horned Lark	*Eremophila alpestris*
Eskimo Curlew	*Numenius borealis*	Lapland Longspur	*Calcarius laponicus*
Whimbrel	*Numenius phaeopus*	Snow Bunting	*Plectrophenax hyperboreus*

Source: Godfrey, W.E. 1986. The birds of Canada. Rev. ed. Natl. Mus. Can., Ottawa. 595 pp.

Alphabetical index of Key Habitat Sites

	Page
Abbajalik and Ijutuk Islands	81
Akimiski Island	169
Akpatok Island	147
Anderson River Delta	19
Awrey Island	143
Baillarge Bay	69
Baillie-Hamilton Island	39
Batty Bay	61
Beaver Lake	103
Berlinguet Inlet	67
Boas River	131
Boatswain Bay	171
Brackett Lake	97
Browne Island	37
Buchan Gulf	77
Cape Dorset	137
Cape Graham Moore	75
Cape Fay	71
Cape Liddon	55
Cape Parry	23
Cape Searle	83
Cape Vera	43
Cheyne Islands	35
Coats Island	135
Coburg Island	53
Creswell Bay	63
Digges Sound	141
East Bay	133
Eastern Devon Island	51
Egg River	25
Eider Islands	149
Foxe Basin Islands	89
Fraser Island	139
Great Plain of the Koukdjuak	91
Gyrfalcon Islands	153
Hannah Bay	173
Hantzsch Island	145
Harrowby Bay	21
Hobhouse Inlet	57
Inglefield Mountains	49
Jenny Lind Island	113
Koktac River Archipelago	157
Kugaluk River	17
Lower Back River	119
Lower Mackenzie River Islands	93
Mackenzie River Delta	15
McConnell River	127
Middle Back River	117
Middle Mackenzie River Islands	95
Middle Quoich River	125
Mills Lake	101
North Arm, Great Slave Lake	107
North Belcher Islands	161
North Kent Island	41
North Spicer Island	87
Northeast James Bay	167
Northeast Ungava Bay	155
Northwest Point	105
Northwestern Brodeur Peninsula	65
Plover and Payne Islands	151
Polar Bear Pass	33
Prince Leopold Island	59
Prince Patrick Island	29
Queen Maud Gulf	115
Rasmussen Lowlands	123
Reid Bay	85

Page

Salikuit Islands 163
Sass and Nyarling Rivers 111
Scott Inlet 79
Seymour Island 31
Skruis Point 45
Slave River Delta 109
Sleeper Islands 159
South Bylot Island 73
Southeastern Mackenzie Mountains 99
Sydkap Ice Field 47

Thelon River 121
Thomsen River 27
Turton Island 129
Twin Islands 165

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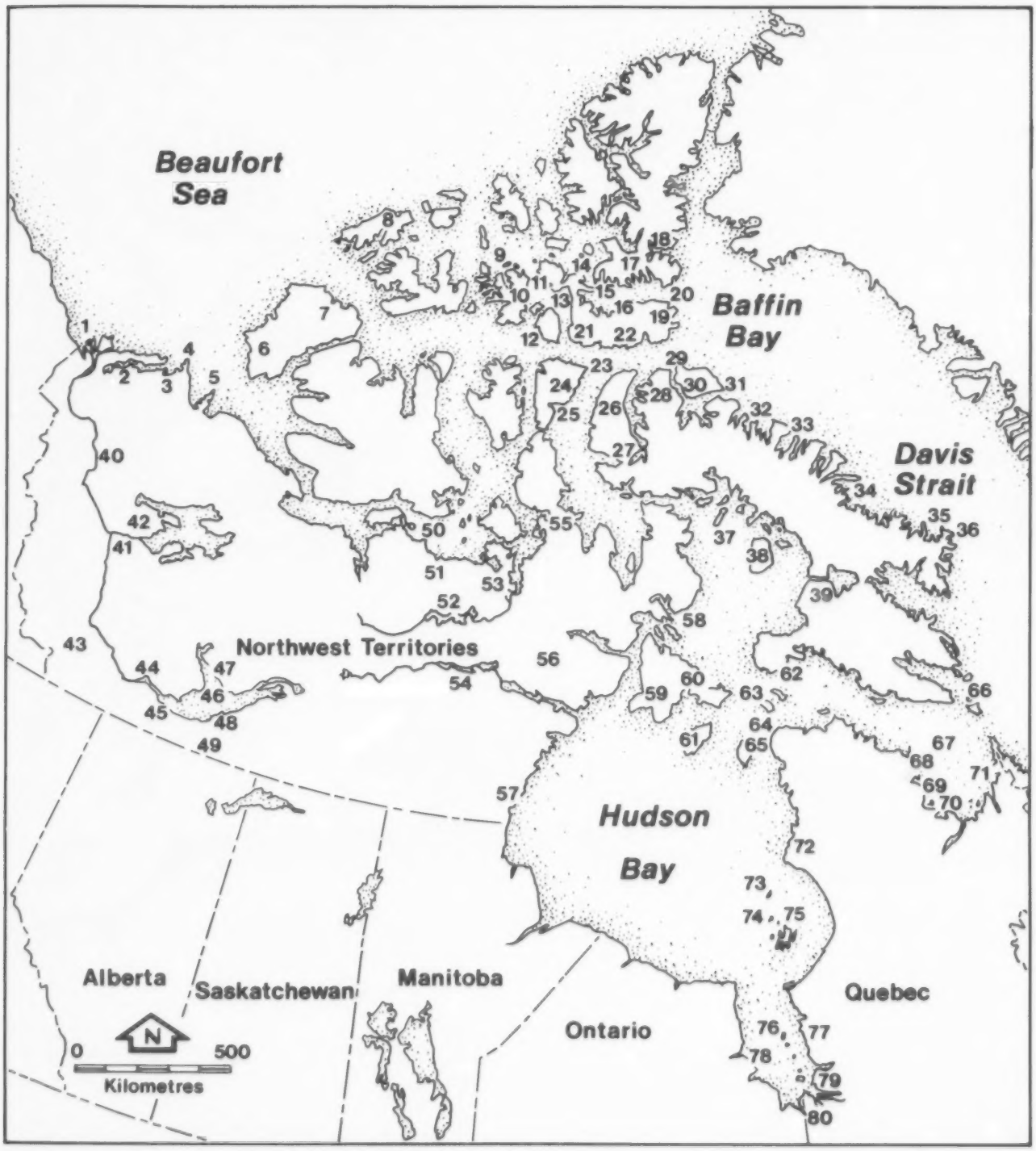
Geographic index of Key Habitat Sites (see facing map)

	Page
1. Mackenzie River Delta	15
2. Kugaluk River	17
3. Anderson River Delta	19
4. Harrowby Bay	21
5. Cape Parry	23
6. Egg River	25
7. Thomsen River	27
8. Prince Patrick Island	29
9. Seymour Island	31
10. Polar Bear Pass	33
11. Cheyne Islands	35
12. Browne Island	37
13. Baillie-Hamilton Island	39
14. North Kent Island	41
15. Cape Vera	43
16. Skruis Point	45
17. Sydkap Ice Field	47
18. Inglefield Mountains	49
19. Eastern Devon Island	51
20. Coburg Island	53
21. Cape Liddon	55
22. Hobhouse Inlet	57
23. Prince Leopold Island	59
24. Batty Bay	61
25. Creswell Bay	63
26. Northwestern Brodeur Peninsula	65
27. Berlinguet Inlet	67
28. Baillarge Bay	69
29. Cape Hay	71
30. South Bylot Island	73
31. Cape Graham Moore	75
32. Buchan Gulf	77
33. Scott Inlet	79
34. Abbajalik and Ijutuk Islands	81
35. Cape Searle	83
36. Reid Bay	85
37. North Spicer Island	87
38. Foxe Basin Islands	89
39. Great Plain of the Koukdjuak	91
40. Lower Mackenzie River Islands	93
41. Middle Mackenzie River Islands	95
42. Brackett Lake	97
43. Southeastern Mackenzie Mountains	99
44. Mills Lake	101
45. Beaver Lake	103
46. Northwest Point	105
47. North Arm, Great Slave Lake	107
48. Slave River Delta	109
49. Sass and Nyarling Rivers	111
50. Jenny Lind Island	113
51. Queen Maud Gulf	115
52. Middle Back River	117
53. Lower Back River	119
54. Thelon River	121
55. Rasmussen Lowlands	123
56. Middle Quoich River	125
57. McConnell River	127
58. Turton Island	129
59. Boas River	131
60. East Bay	133
61. Coats Island	135
62. Cape Dorset	137
63. Fraser Island	139
64. Digges Sound	141
65. Awrey Island	143
66. Hantzsch Island	145
67. Akpatok Island	147
68. Eider Islands	149
69. Plover and Payne Islands	151
70. Gyrfalcon Islands	153
71. Northeast Ungava Bay	155
72. Koktac River Archipelago	157
73. Sleeper Islands	159
74. North Belcher Islands	161
75. Salikuit Islands	163
76. Twin Islands	165
77. Northeast James Bay	167
78. Akimiski Island	169
79. Boatswain Bay	171
80. Hannah Bay	173

Index map of Key Habitat Sites